

American FORESTS



OCTOBER 1933

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AMERICAN FORESTS

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The Voice of the Forest

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The Resurrection of Mr. Jasper Gray

BY RUTHERFORD PLATT

*Sturdy his house and heart, patient and wise
In simple ways; his popularity
Confined to half a dozen neighboring ties,
Without romance, without diversity.
Yet held his star a subtle destiny,
For when entombed within the hill he lay,
Crept from that ground the immortality
Spawned in the humble mould of Jasper Gray.*

*When silence fell the mould began to rise,
The stirring sapling grew into a tree
Until a monument that time defies,
A lofty, elemental canopy,
Within whose vault an heavenly symphony
Born of the winds, the mighty branches sway,
A glistening, tossing, emerald jubilee
Transformed the humble mould of Jasper
Gray.*

*The honeysuckle's kissed by butterflies,
(Perfume invites such gentle larceny),
Bob White answers Bob White with liquid
cries,*

And merrily hums a busy little bee.

These are the vassals of serenity.

*These with the fireflies and their night dis-
play,*

*The stars' and moon's perpetual pageantry
Exalts the humble mould of Jasper Gray.*

*Behold how struggle and intensity
And all the fever of a fleeting day
Fade in this vision of eternity,
Before the miracle of Jasper Gray!*

Musing, one day, under an ancient elm of colossal size on his farm in the Connecticut River Valley, the author was inspired to set down, in ballade style, this beautiful and romantic conception. The tree was apparently planted as a sapling at or near the head of the grave, for the old stone is now embedded in its roots, as shown in the drawing
by Max Jaediker.

RACKETEERING THE OUTDOORS

How the American Public is being Robbed of its Free Playgrounds
by the Fraudulent Use of the Mining Laws

By ROBERT W. AYRES

ANTIQUATED mining laws, manipulated by methods that savor of the modern racketeer, are adding another chapter of land buccaneering to the history of the West. As in years past, it is the public lands of the United States that are being plundered and particularly those areas in the National Forests which embrace the choicest outdoor playgrounds of the nation. The piratical gentlemen who are thus writing history for future generations to blush over are not miners in the real sense of the term but are adventurers of the open spaces who are taking advantage of our mining laws to thwart and rob the American public of its free and unrestricted right to use its own outdoors.

Under the guise of mineral discovery, this new racketeer is laying claim to key areas of public lands and demanding tribute from the public. His activities extend not only to choice camping grounds and fishing streams in the National Forests and on the Public Domain but to areas needed immediately or in the near future for roads, dam and reservoir sites, ranger stations, and other public uses. As the mining laws now stand and are being used by this new breed of consciousnessless prospectors, any development on public lands is in fact subject

to a hold-up on the part of the racketeer by the simple process of filing mineral locations on the lands involved. The fact that minerals sufficient to justify mining may not be present seems to help rather than prevent the racket.

In the Southwest, where water is the key to progress, and in the western National Forests generally, where over thirty million people annually are seeking outdoor recreation, any land necessary for dams, reservoirs, camp sites, recreational areas, mountain roads and trails is considered rich "pay dirt" for the fake miner.

Last year the Los Angeles Flood Control District planned to construct two reservoirs. When construction began the dam locations were found covered by seventy-two mining claims. Knowing that these claims were fraudulent, but unable to



The recreation "miner" locating his claim. And so this stretch of river and highway in the Klamath National Forest was found to be covered by a mining claim immediately after completion of the road.

A Forest Service recreation area on Gull Lake, in the Mono National Forest, entirely covered by mineral locations. The locator keeps the public off unless "tribute" is paid.



On this "mining claim" in the Angeles National Forest in California, the discovery of seventeen minerals was claimed. And the whole district in which it is located produces only about \$2,700 worth of minerals annually!

await the protracted outcome of litigation, the County "paid off" with \$125,000 of the tax-payers' money. This sum represented more than the value of all the gold mined in Los Angeles County for thirty years. Soon afterwards the City of Los Angeles found itself held up by a group of thirty mining claims located on the site of its proposed dam and reservoir in Boquet Canyon, in the Sierra Madre Mountains. The City was informed that it could have the claims by payment of \$200,000. Instead of "shelling out" the City contested the claims and they were cancelled by final decision of the Interior Department. One of these locators admitted having filed on over 200 claims in this locality. The City of Seattle has been

obliged to purchase several mining locations at outrageous prices when constructing a municipal power transmission line along the Skagit River in Washington. In fact the route itself had to be changed because of the extravagant demands of another group of mine locators.

Two years ago the Western Pacific and the Great Northern Railroads started construction on a connecting link in California. One of the contractors used an abandoned mining claim as a construction camp and was made defendant in a \$30,000 damage suit. The old claim had been abandoned as valueless twenty years ago by the bona fide miner. But the new real estate miner saw possibilities in the mining laws not contemplated by the old timers. When the Southern Pacific Railroad started construction on its Natron Cut-off in Oregon some years ago a mining boom occurred, and such was the enthusiasm that even a sawmill town was considered mineral ground. This boom collapsed when a government mining expert filed charges against these claims.

Railroads do not suffer from the real estate miner as do the rapidly expanding system of roads and highways in the West. There is a wealth of opportunity in road construction for the alleged prospector who uses the mining laws as a club. He follows surveyors to ascertain the location of new roads. He then locates his claims on all key spots along the route, such as springs and ground suitable for construction camps. The process of law necessary to prove his locations illegal would so delay construction that the road building agencies usually pay tribute to the grafter and his "mining rights." An effective trick is to file a claim on gravel or ballast rock just as construction is about to commence. So aggravated has this form of graft become in highway construction in California that in 1931 the State highway engineer in a letter to the Chief of the United States Bureau of Public Roads, stated that "the filing of mining claims on public lands within National Forests and adjacent to the highways presents a detriment and a menace to the development and maintenance of these highways and their scenic and recreational value . . . as a rule these mineral locations are not made for legitimate mining purposes but to hold the land for such uses as service stations and hot-dog stands, and are actually speculative in character."

These examples of the perversion of the government mining laws are typical of what is going on, and will no doubt increase, on the public lands of the West. They concern only public utilities. The average citizen is only indirectly affected by hard luck connected with the construction of dams, reservoirs and roads. Such occurrences may affect his temporary convenience and the shakedown he pays to the fake miners is concealed in his tax rate. What should arouse his interest is interference with his recreation when



Many valuable recreational sites along National Forest highways posing as "mining developments," are being used as sites for filling stations and grocery stores.

he is seeking health and pleasure on summer vacations. When it comes to abusing the mining laws to gain control of lands needed as free public playgrounds, the fraudulent miner is most active and greedy. His selfishness is unbounded and his disregard for the rights of others is unparalleled. The greater part of these summer vacation grounds are located in the National Forests of the West and the records of the United States Forest Service, especially in California, contain hundreds of examples of his work. Only a few can be cited here.

The Timpanogos Cave in Utah was discovered in 1915. There was no suggestion of valuable minerals in the geologic formation, but this did not prevent the discoverer from locating it as a mining claim. This claim was contested by the Forest Service and was declared invalid. The claimant was asking \$10,000 for the cave. This natural curiosity was



An old mining country in the Klamath Forest, which has become a mecca for vacationists, and where summer homes have replaced the miners' cabins. The land was acquired under the mining laws.

then developed by the Forest Service and the local community, with trails and a lighting system. Then another "miner" with an eye to business located it again and with the aid of a lawyer and witnesses tried to obtain possession. Fortunately he was unsuccessful and the cave remained in public ownership. It is now protected from the mining laws by being proclaimed a National Monument and is visited annually by more than 8,000 people.

The mountain regions in the National Forests contain many medicinal springs. When located on public land they

are improved and made accessible to visitors without charge. These are shining marks for the fraudulent miner. Two noted hot springs, the Ohanapecosh, in the Rainier National Forest, in Washington, and the Salt Creek in the Cascade National Forest, in Oregon, have been located by alleged miners. These claims have been bitterly contested by the Forest Service to retain them in government



Eight million pleasure-loving Americans actually camped in their National Forests in 1932. The free use of choice camping sites is threatened by the misuse of existing mining laws by unscrupulous racketeers of these public playgrounds.

ownership and save them for free public use. The Easley Hot Springs, in Idaho, supplying water for a bathing pool, used without profit by vacationists, was covered by a mining claim. This also was saved for the public.

The most flagrant prostitution of the mining laws, and one affecting the greatest number of people, is the wholesale monopoly of fishing streams, lake borders, and camping or recreation grounds. In California the Klamath River in the Klamath National Forest is one of the finest fishing streams in the West. Before the development of motor roads in the Klamath River country it was scarcely visited by summer vacationists. Today, more than half of the land along the fifty miles of river in the National Forest has passed into private ownership, largely by means of the mining laws. More than half of the remaining length is monopolized by mining claims with the result that access to the river for fishing is largely in the hands of the locators who exact their pounds of flesh from the public.

Similar conditions prevail on the Trinity River in the same forest and along the North Fork of the Plumas River in the Plumas National Forest. All of these rivers were prospected and mined years ago and practically abandoned by bona fide miners.

Within the National Forests of Washington and Oregon there will be found notices of mining locations on beautiful mountain park areas, on the shores of Lake Chelan and other fine lakes, on beauty spots bordering scenic roads, in fact everywhere in the mountain regions where there are especially fine recreation grounds the land racketeer has posted his claim. The same conditions exist in many of the National Forests of the western states where there is a demand for summer vacation grounds, the peak being reached in California. The speculator, the bogus mining promoter, the amateur miner and the innocent citizen, all with the heritage of easy-going "land conscience" behind them, are acquiring and endeavoring to acquire with a minimum of effort and expense the strategic places and the cream of the western playgrounds intended for free public use and enjoyment. Nothing is sacred to the avaricious eye of the fake miner. He locates his claims on lots held under permit by those who have leased summer home sites from the Forest Service, and cuts down precious trees under guise of developing his "claims." He invades primitive areas in National Forests which are set aside to provide reminiscences of pioneer days and in which no roads or permanent structures are allowed. He sets his stakes on improved government ranger stations used by the Forest Service in the protection and administration of the National Forests and claims them as his property.

The rising tide of this new class of land grabbers who talk of "mining rights"—as if such rights exist except where legal mineral values are discovered—threatens to wreck the administration of the recreational and other resources of the National Forests and to leave for free public use only the dregs of America's scenic heritage in the West. It may be asked why the Government does not dispossess the fraudulent claimants. It endeavors to do so but the procedure is a long and expensive one. Once a claim is located, it devolves upon the government to prove that it is invalid. This involves an examination of the claim on the ground by an expert mineral examination followed by a hearing before the local land office. The claimant may then appeal or by other methods delay final decision for years. In the meantime he holds his claim. Millions of dollars have been spent by the government seeking to clear locations obviously invalid.

Probably no class of land grabbers operate under more favorable circumstances than the bogus miner. He needs no capital, no influence or political pull, although the latter helps in a tight place. Least of all he needs no knowledge of

his alleged profession. Geology, mineralogy and practical mining mean nothing to him. Unlike the old-time prospector, he does not come to grips with nature in the wilderness, lead his burro over rough trackless mountains, does not explore unknown places in search of metals. The racketeer miner rides the highways in an automobile. His range of possible values has been enlarged by a beneficent Government to include "industrial minerals," a definition embracing almost every inorganic substance.


Let it be stated here that the mining industry and ethical professional mining men have no hand in this fraud. The industry wishes to preserve privileges necessary to its development and it may have been misled by plausible exponents of this new graft. But it is not to the interests of the industry to lend aid to any fraudulent use of laws enacted for legitimate purposes. It is a fact that where mineral production is largest and mining is most active there is the least amount of misuse of the mining laws. Individuals and groups using these laws fraudulently have no interest in legitimate mining.

The principal reason that this new land grab is operating so smoothly is because the mining laws are still in the days of the ox cart and the world has moved forward to radio, airplanes and technocracy. Sixty years ago, when Congress passed the mining laws, minerals were about the only realizable values in the mountain lands of the West. The laws were adapted to the needs of the time and to make acquisition easy. Today the West is no longer wild and the mountain areas are mostly within National Forests where recreation, timber, forage and water for power irrigation and domestic use are the chief resources and should be preserved in public ownership. The mining of metals has faded from a pioneer occupation of first importance to an industry of small relative economic value.

Romance lights the days of '49, and the glory of the boom times of Tombstone, Leadville, Virginia City, and Tonopah are memories. Yet the laws designed for an era of settlement remain today as when enacted between 1866 and 1872. The mining acts are the only land laws which have not been amended to meet changing economic and social conditions. They assume that minerals of any kind and in any quantity constitute the highest use of the mountain lands.

Operating under this antiquated legislation an individual can, without restriction, lay claim to public lands, except those in National Parks, National Monuments, and other special government reservations. One individual filed 268 claims embracing over 5,000 acres of valuable recreational land in the Angeles National Forest in California. He can hold all of this so long as he files an affidavit each year that he has done \$100 worth of work, or has hired someone to do it for him. By the simple staking out and declaration that the land is valuable for minerals he has absolute control over the land and cannot be dispossessed until it is proven, in a contest before the Department of the Interior, that his claims are illegal. A miner does not have to prove any discovery of mineral when he stakes his claim and makes his filing; he simply alleges that he has made a discovery. Nor, so far as the Federal Government is concerned, does he have to prove that he has done \$100 worth of assessment work each year in order to hold the land.

The filing of a claim and annual assessment work gives possession for mining purposes only. He cannot use it for purposes other than for the development of minerals. But under guise of mining work, such claims are used for summer homes, control of public utility developments, hunting lodges, permanent homes, speculation, bootlegging joints, and a score of other uses. In fact, eighteen different fraudulent uses were made of mining claims in California. Complete possession of the land in fee (*Continuing on page 479*)



FORESTRY IN SWEDEN FOR THE UNEMPLOYED

By NABOTH HEDIN

Photographs by courtesy of the
American-Swedish News Exchange

PRESIDENT ROOSEVELT'S policy of using the forests for the relief of unemployment has been adopted also in Sweden, though with several interesting and carefully planned modifications. The camp system for young men is to be used, too, but only to a limited degree. It is to be offered to boys of from eighteen to twenty-one years of age and will combine the lighter kind of forestry work with theoretical instruction—virtually forestry schools in the woods.

The initiative for organizing the forestry camps will be left to local unemployment committees, acting in cooperation with the local school authorities. How many unemployed youths there are in the country is not known exactly, as the figure changes almost daily due to reemployment in farming and regular industries. At the end of February, when unemployment was at its height, there were about 60,000 unemployed under twenty-five years of age, but since then the total number of unemployed has been cut from 189,225 in January to 145,458 by the end of June.

In its instructions to the local committees, the National Unemployment Relief Administration, which has general charge of the expenditure of state funds for unemployment relief, states that it is prepared to give state aid to organized courses for young men, in which practical work is to be combined with theoretical instruction in trades or in general educational subjects. To be admitted a boy has to be at least sixteen years old and to have been without work for at least six days. Graduates of the state normal schools who have not been able to obtain regular positions are suggested as teachers. Light forestry work, construction of roads, grading for athletic fields, or even layouts for gardens or parks have been recommended as physical employment. The manual labor will be limited to four hours a day, the theoretical instruction to two hours and sports or gymnastics to another two hours. As leaders of the forestry work, unemployed foresters, trained in

Sweden's "green gold" — as her forests are known. Her enormous supply is maintained through systematic reforestation. This is a spruce forest in Norrland.



Timber rafts towed across a bay of the Baltic near Sundsvall, the chief lumber port of Sweden, where the traditional visitor reports,—“I saw saw by saw as far as I saw.” At the port of Sundsvall several rivers from the forests of the inland converge.

the Government schools, have been proposed, and the theoretical instruction is to be concentrated as much as possible on subjects of practical use, somewhat similar to the summer courses in the popular high schools, which supplement the regular public school education.

Some camps will be organized by the National Relief Administration, but most of them are to be set up by local authorities as the local needs may indicate. The work to be done should be such that it will not be stopped by the fall or winter weather and the boys will be housed in permanent buildings, either abandoned army barracks or vacant factories, idle forestry camps, or discontinued school houses. The amounts contributed from the state funds depend entirely on local conditions.

Publicly financed forestry work in Sweden has hitherto been restricted, as a rule, to the state domains, and appropriations for that purpose were continued by this year's session of the Riksdag or national legislature, but special credits were also voted to improve among other things the accessibility of privately owned forests and to promote small

agricultural holdings for part-time forestry workers. An appropriation was also made to increase the use of domestic forest products, particularly as fuel. A special fund was even voted to aid purchasers of trucks and tractors using charcoal gas generators, so as to reduce the imports of gasoline.

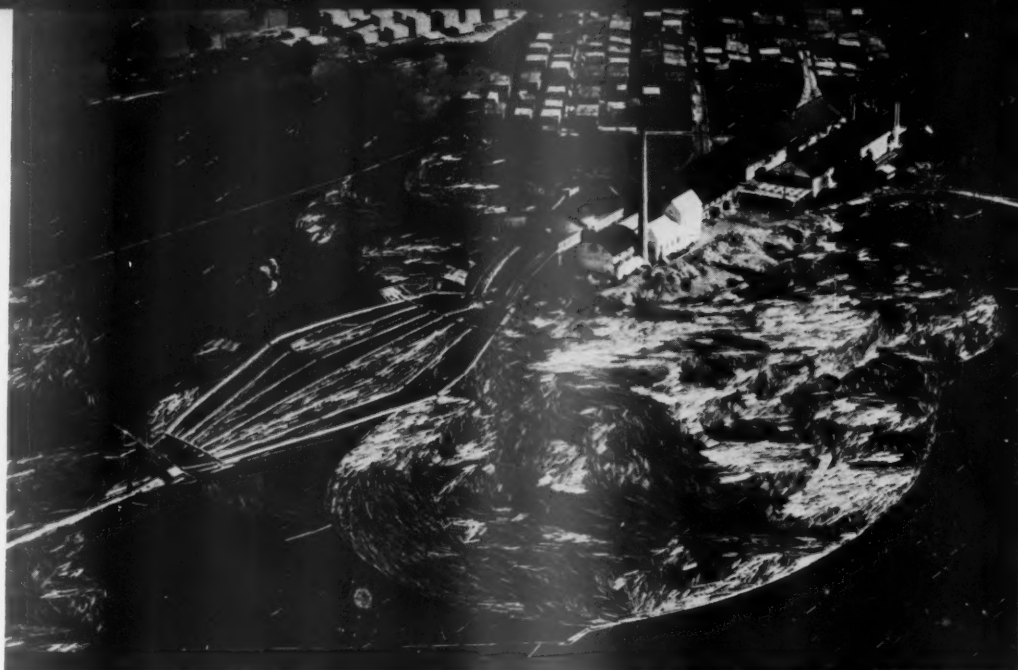
Though relatively a small country so far as population is concerned, Sweden is territorially the fifth largest state in Europe. About sixty per cent of this area, or roughly 58,000,000 acres, consist of forests. Plenty of snow in winter and adequate rainfalls in summer not only promote the growth of timber, particularly pine and spruce, but also facilitate transportation by water over lakes and rivers. Sweden's forests are therefore easily accessible from the sea, which makes the export of its products convenient and economical.

About twenty-three per cent of the forest area is owned by the state or by other public bodies, such as churches, parishes, or municipalities. The remainder is divided among farmers or private industrial concerns. The total volume of



Forest work is offering unemployment relief in Sweden. Here log drivers are breaking up a jam in a river of Vermland in western Sweden. In this province most of the logs are floated down to the mills on the shore of Lake Vaner, one of the largest lakes in Europe.

Air view of a typical Swedish sawmill, with its stacks of lumber. Within the booms are held the logs for assortment before they are fed to the saws. The plant is located in the central province of Vestmanland, at Skinnskatteberg.



standing timber, whether on public or private land, has been estimated by the National Forestry Assessment Commission, after a systematic, nation-wide survey, at 1,417,000,000 cubic meters roughly divided between spruce and pine, and the annual regrowth, previously subject to wide guesses, at 47,650,000 cubic meters, or more than has been cut in any recent year. At a normal rate of consumption, Sweden's forest resources may, therefore, be said to be permanent. They are the country's most valuable asset and about one-half of Sweden's exports are forest products.

It is therefore little wonder that the subject of forest conservation has been of keen public interest for many years. The state-owned College of Forestry is over 100 years old and there specialists are trained for both public and private service. The cutting of timber has been regulated by law to a certain extent for centuries and the law now in effect has for its main object permanent reforestation and the protection of young growth. Within these restrictions the owners of private tracts are free to manage their property as seems to them most economical. The Swedish forestry system is

quite flexible.

For the ordinary promotion of forestry the Riksdag this year appropriated the same sum as for each of the last two years, 830,000 kronor. The drainage appropriation for the public forests was cut from 1,000,000 to 750,000 kronor, but for replantation the same sum of 350,000 kronor was assigned. The appropriations for the State Forestry College and the Experimental Station were not cut.

On the other hand, the Riksdag made a departure by voting a fund of 5,000,000 kronor as a public contribution to certain projects on private lands, such as drainage, replantation, for which the owners will pay the greater share, the purpose being to provide more work for the unemployed on such permanent improvements as will, in turn, yield more jobs in the future. To promote a greater use of forest products the Riksdag set aside a little over 1,000,000 kronor. This money will be spent for experimenting with the making of charcoal briquettes, and the reconstruction of heating plants for the use of wood as fuel instead of coal, which Sweden has to import. All public (Continuing on page 474)

Since fifty-nine per cent of Sweden is covered with forest, it naturally offers a great opportunity for the absorption of labor and the reduction of unemployment. This richly wooded river, near the Norwegian frontier, is a typical rapid with plenty of water for floating timber.





IN THE HEART OF THE SWAMP

By ARCHIBALD RUTLEDGE

THE traveler into the deep South, whether by motor or by rail, as he enters the great coastal plain, is made aware of, and perhaps strangely attracted by the primeval swamps through which he journeys or by whose mystic and forbidden margins he passes. In the North the master-problem of the road-builder is the mountain; in the deep South it is the cypress swamp. For that reason the real heart of a swamp is rarely penetrated by a road of any sort. If it is, then the adjacent borders become too well known to be the home of mystery; and the true heart of the swamp retires miles back into the dim inaccessible.

I have since earliest boyhood days taken a curious interest in these primeval, and by some thought, abysmal, domains. Sometimes upon duty bent, sometimes upon pleasure, at all seasons of the year, at every hour of day and night I have delved into the secrets closed in the heart of the swamp. From this long and affectionate intimacy perhaps it will be possible for me first to correct a few misapprehensions concerning the nature of such places; then to tell some stories of my contacts with the flora and fauna of these mysterious regions.

One wrong idea about a deep swamp is that it is usually under water. The fact is that most swamps have high,

sunny, hardwood ridges, along which it is a pleasure to walk. In spells of dry weather, at points up the river beyond the effect of tides, I have known the great Santee Swamp, the eastern fringes of which almost touch the borders of my plantation in South Carolina, in such a condition that I could walk everywhere with ease and freedom, save for encountering now and then the languorous winding waterways that retire mistily into the little-known wilderness.

Another mistaken idea of the swamp is that it is a rather lifeless place—or at least harbors only monstrous and repellent forms of creation. This conception is doubtless due to the mournful and abysmal character of the swamp's aspect, its suggestions of ancientness, and of almost limitless extent, and the fact that the casual observer who hurries past usually sees rather dreary stretches of stagnant water, of either a sultry yellow or a wine-red color. But the place is *full* of life; hard to observe, however, not so much on account of its native wildness in the presence of man as because of the excellence of the cover and a certain eerie furtiveness that all wild creatures possess, a wariness unrelated to the intruding presence of man.

The Pygmies of the Ituru forests of Africa carry suspended from their necks a series of little flutes, whose treble pipings,



A doe in the heart of the swamp, which furnishes perfectly the wild, secluded cover these wary creatures need,—far from the haunts of human kind, where they may live out their destiny, unmolested by man.



Dreaming trees are reflected in the placid, dark waters of the Lagoon,—so deeply immured in the swamp they are hardly ever rippled save by some form of wilderness life.

comparable to bird-notes, serve as a method of communicating with their fellows without disturbing the game. In some such way the birds and animals of the swamp seem to have a delicate radio; a subdued telegraphic system, far more subtle and interesting than the one prevailing in regions frequented by man. One may walk through the swamp for an hour without seeing or hearing a living thing; but let him sit quietly for fifteen minutes, and life will awaken all about him.

I remember leaving home in a canoe one still morning and paddling up the misty creek and across the starlit river, heading for the deep swamp that lies beyond. Along the dusky banks could be seen, like angel forms, the wild azalea bushes in full blossom. On the river-shores majestic pines, water-oaks, and bald cypresses towered momentarily. The whole spangled firmament seemed mirrored in the moving yet quiescent river. The ancient trees, veiled in their mosses, seemed reposing in perfumed sleep. Across the wide river I entered Flag Creek, which winds mazily through the great river-marsh and leads into the very heart of the swamp. I saw nothing in the way of wild life, and heard nothing, except in a still stretch the lithe black form of an otter swimming across. Seeing the canoe, he humped himself and dove, his long furred tail making his identification, even in that pale starlight, certain. In such lonely waterways there are a good many otters; but they are among the most difficult of wild creatures to observe.

About two miles up the creek I went ashore on a high hardwood ridge. Day was wanly breaking. The first bird-note I heard was that of a barred-owl, hooting sardonically. Then, close at hand, a timid Phoebe-bird, always fairylike and eerie, fluted the first musical note of the mystical spring morning. Down the ridge I went; and when only a hundred yards from the canoe, I almost walked into two whitetailed deer, coming toward me, retiring into the dense thickets of young cane for their daytime rest.

A wild-rose light was now in the heavens. Choosing carefully a place from which I could make observations—a fallen log, which, in its fall, had carried down a mass of jasmine and smilax vines—I sat down and took out my turkey-call. In that latitude, the wild turkey, most magnificent of American game birds, begins to show signs of mating as early as February; and by the middle of March



It is wrong to believe that deep swamp country is dangerous and must all lie under water, for most swamps have such high, sunny hardwood ridges as this, where it is perfectly safe and a delight to walk and observe the fascinating picture unfold.

its love-season is well advanced. Nor is there anything in the study of nature that I enjoy more than in calling to me one of these superb old sultans. In the heart of the swamp it is not a difficult thing to do if one goes about it with discretion.

The first thing for the caller to do is to locate his gobbler, which will be, of course, at dawn, still in a tree. The easy way to locate him is to imitate the whoop of an owl, a sound with which the turkey is so familiar that it rouses him to answer in a challenging fashion without creating in him any suspicion. During the rapturous season of mating and of love, a wild gobbler will answer almost any natural noise of the forest, even the rapping of a woodpecker. But the one call that will bring him flying or running to you is the voice of the hen.

Before touching my call, I hooted like a barred owl. To my surprise and delight I was answered, not by one, but by five gobblers, roosting at various distances from me—from two hundred yards to a quarter of a mile.

Than the flight of a bald eagle with the wild and gloomy background of a thunderstorm, I am not familiar with any flight in the natural world comparable in impressiveness with that of the wild turkey when once he "gets going." So ponderous is his weight, that in rising from the ground it is customary for him to take a little run, and his rise may have the awkwardness of disturbed majesty; but when he sails from an elevation, every aspect of his flight has a dark and superb nobility.

To the nearest of the roosted birds I now decided to give my attention. In some states there is a law against calling a turkey to a gun; yet in many cases this calling is the bird's best insurance; for if the least false note is sounded, he will instantly be put on his guard. A delicate art is required that is predicated on an understanding of the monarch's somewhat fastidious emotional nature. Patience, infinite restraint to call but once when there is the exciting temptation to call constantly, and the ability to sit motionless even when the mosquitoes are bad—these are among the prime requisites in deceiving this monarch of the wilds.

There is a nice psychology involved which is so closely akin to that of human nature as to be either impressive or comical, as one cares to view the matter. If the hen calls but once or twice, in her diffidence there is allurements, mystery, a suggestion of nonchalance, which the male heart



In this flooded land, black waters slept, in the twilight of the morning,—rimmed by great cypresses and pines, moss-hung—creating a picture of tranquil beauty.

^^^

There is not a tumultuous riot of jungle in the swamp—one is impressed by the delicate and perfect balance of nature—here each beautiful form of life is provided for,—the shrinking violet as well as roses such as these, on the river's edge.

vvv



cannot resist. But if the calling be frequent and importunate, the gobbler will disdainfully disregard such too-obvious appeals and blandishments. Like any true man, he is going to despise the woman who throws her heart at his feet. Not to be a bold blossom, proffering herself openly, but to be a witching wildflower by the waterfall, that now is seen, and now is lost from sight—this strategy is effective in nature as well as in human nature.

Making sure that I was near enough to this particular gobbler to enable him to hear and to locate me, across the misty swamp I sounded the call: "Keow! Keow! Keow! Keow!"

"Gil-obble-obble-obble!" came the virile answer immediately from the moss-shrouded tupelos up the ridge from where I was seated. A second gobbler answered farther off. This fact was fortunate; for here were rivals. A few moments later, a Cooper's hawk, early awing, gave a scream above the silent river. Again both gobblers answered vigorously, but I kept silent.

While I was playing my waiting game, the wild sweet woodland was awaking all about me. In this solitude the primeval prevails, and it seems to sleep and to wake under the aspect of eternity. Day broadened fast; and the pink and pearly light tenderly revealed the quiet beauty of the trees and bushes, now in their first delicate emerald mist of greenery. The cypresses are the most impressive trees of the swamp—huge old Titans, ten feet through at the base. Here the holly grows to magnificent proportions, towering seventy feet. Here the water-oak, the tupelo, the sweet gum, the black gum, and the yellow pine throng in friendly concourse. Over the bushes and the low trees climbs the yellow jasmine; banding the larger growths huge muscadines clamber. Among the humbler flora are the homelike blackberry, the wild blue flag, the wampee, long purple carpets of blue and white violets, and ferns of magical delicacy and design.

Of the wild things awake and moving in the swamp I saw an old raccoon, pacing sedately down an animal path that ran through a thin growth of dwarf canes. Cardinals I heard, and red-winged blackbirds, vireos and woodpeckers, gray squirrels in positive abundance, brown thrashers, wood-ducks. While I was enjoying the beauty of the swamp about me, the two gobblers had been calling more vehemently, until the whole dewy forest rang with their importunate clamor. It had been twenty minutes since I had given my call a touch. Now I sounded it again, softly, seductively. I then heard what only one who haunts the wilderness will hear: the peculiar pompous sounds that a gobbler makes while strutting on the limb on which he has roosted. The performance is exactly like that of a tame bird, except that the monarch's stance is a very teetery one, so that his attempt to make himself overwhelmingly imposing is interrupted by the nervous necessity of keeping his balance.

After a few minutes I heard one of the great birds fly to the ground; then the other came splendidly hurtling with ponderous grace to the earth. I gave two faint notes on the call, and then put it in my pocket. They would come to me.

Peering through the tangled screen of vines and twigs, I watched the long slope of the ridge for the approach of the two monarchs. Coming from slightly different directions, they would probably meet within sight of me. Then, unless I interfered, a battle would ensue.

From the time I started to call until the first gobbler

came within sight, the elapsed time was fifty-five minutes. Broad daylight had penetrated even the most remote fastnesses of the swamp.

Almost simultaneously the gobblers appeared: one on the crest of the ridge and one on the side. With obvious yet wary majesty they came, their plumage gleaming, their heads held high. They know that they should now be within sight of the object of their desire. All this while, faintly and far away, I could hear the three others sounding their challenges from the trees from which they had not yet come down. While the deer's sense of smell is most acute, the wild turkey's is almost negligible. But his eyes are telescopic in their power. An old hunter once graphically said to me: "A wild turkey can see a hummingbird change his course on the verge of the horizon." But what he detects most easily is movement; and if one remains perfectly still, especially behind some kind of natural cover, the monarch may come very close.

The two birds were aware that they had come to the rendezvous, and that the hen must now be in sight. They therefore recommenced their strutting, each trying to outdo the other in creating an illusion of grandeur in the presence of the supposed lady-love. The first rays of the sun were now striking long golden lances through the dewy glade, throwing a natural spotlight on these two magnificent birds, as with rigid wings spread until they touched the ground, they

pirouetted in their stately woodland minuet. These knights of the deep swamp, while not strutting prodigiously and menacingly, would suddenly turn normal, and would peer with searching beady eyes for the true object of all their self-display. Yet it was quite evident that they intended to fight; and as that seemed a shame I rose from my hiding-place and stepped quietly forward.

The getaway of a startled wild turkey is one of the most artistic

performances in nature. One second these two gobblers stood before me in all their pride and gallantry of bearing; the next, they had sped enigmatically away into the flowering edges of the friendly morass, leaving me standing in the heart of the swamp alone.

Northward then I wandered along the fragrant ridge, amid an aromatic silence broken only by the melodious wind choiring through the mighty pines and the songs of happy birds. At the headwaters of the creek there is a lake or lagoon of rather large size, one bank of which is of considerable height, affording the observer a clear view of the placid dark waters, so deeply immured in the swamp that they are hardly ever rippled save by some form of wilderness life. On my way to the lake I walked up on an old, old swamp-stag, couched in the canes along the marshes. He wore no antlers, but I knew he was a buck from his burliness and from the shape and the depth of impression of his track. A little farther on I saw two cottonmouth moccasins lying on the edge of a muddy slue. They crave wary walking; for not only are they truculent and deadly, but they give no warning save a hiss, and often not that. Save an occasional diamondback rattler, the moccasin is the only venomous serpent of the swamp. In the pinelands and on the plantations this lethal group is increased by the presence of the timber rattler, the pygmy rattler, the highland moccasin or copperhead, and the coral snake, the last apparently harmless, and resembling nothing so much as a gaudy cheap necklace of black, red, and yellow. Yet this little serpent is of the dreaded cobra family. (Continuing on page 477)

FAITH

*The trees forever as they grow,
Reach always toward the sunny sky;
Undaunted, tho they seem to die
In Winter. Can the wise trees know
That greening leaves shall follow snow?*

—WILLIAM B. ASHLEY.



On the Trail Back of Beyond

THE SUN RIVER RIDERS

Second Party of "Trail Riders of the National Forests" Completes Eventful Trip

THE great Sun River Wilderness of Montana, where the colorful Blackfeet Indians held their weird sun dances and engaged in bloody warfare, has been successfully explored by the "Trail Riders of the National Forests." The party, the second to be sent out this summer by The American Forestry Association, and consisting of ten men and women, entered this wild country of the Lewis and Clark National Forest on August 16, returning to Helena seven days later.

Although an unusually severe August storm forced them to turn back at the very foot of the famous Chinese Wall on the Continental Divide, it made it possible for the riders to

behold a splendor rarely seen—a panorama of snow and clouds that turned summer into winter in the short span of ten hours. Riding into icy rain and snow, and enveloped by low-hanging clouds, the party turned back with their goal—the Chinese Wall—but a few miles away, and only when snow on the Divide had reached a depth of from seven to ten inches and when travel over the steep trails became too hazardous. Yet they put their horses and pack string over eighty miles of trail, through broad meadows where great elk herds will gather when winter drives them from the higher altitudes, through avenues of lodgepole pine, Douglas fir and Engleman spruce, (Continuing on page 468)



THE SUN RIVER TRAIL RIDERS

Front, left to right, "Ed," cook; Mrs. Brinkley Snowden, Memphis; Stanley Rowe, Cincinnati; Miss Celia Sachs, New York; Henry DeM. Lucas, Cleveland; Mrs. Stanley Rowe; Stanley Rowe, Jr.; "Jack," Montana cowboy; Henry M. Lucas, Cleveland; Gale Ballard, assistant forest ranger; and Miss Lynn Marsh, Great Falls, Montana. Back, left to right, "Boone," wrangler; "Klick," wrangler; "Pete," guide; John B. Taylor, United States Forest Service; W. N. Streeter, District Ranger. Erle Kauffman, who took the picture, represented The American Forestry Association.



THE RIDERS TAKE THE PATHS AND THRILL

As the "big ride" got under way from Allan Ranch fifteen miles from the road's end.

Out across a wide prairie the party strung—the same prairie that held the thousands of buffalo Lewis and Clark happened upon during their early pilgrimage into the Northwest.



Man and his mount pause for a brief rest along the trail—Henry M. Lucas and "Jim."

Into a wilderness that reached for a hundred miles to the north, with the pack string ahead.



THE TRAIL INTO UNKNOWN ALL ING ADVENTURE

Down out of the storm—a stop for lunch at Two Shacks under bold Bear Top Mountain.



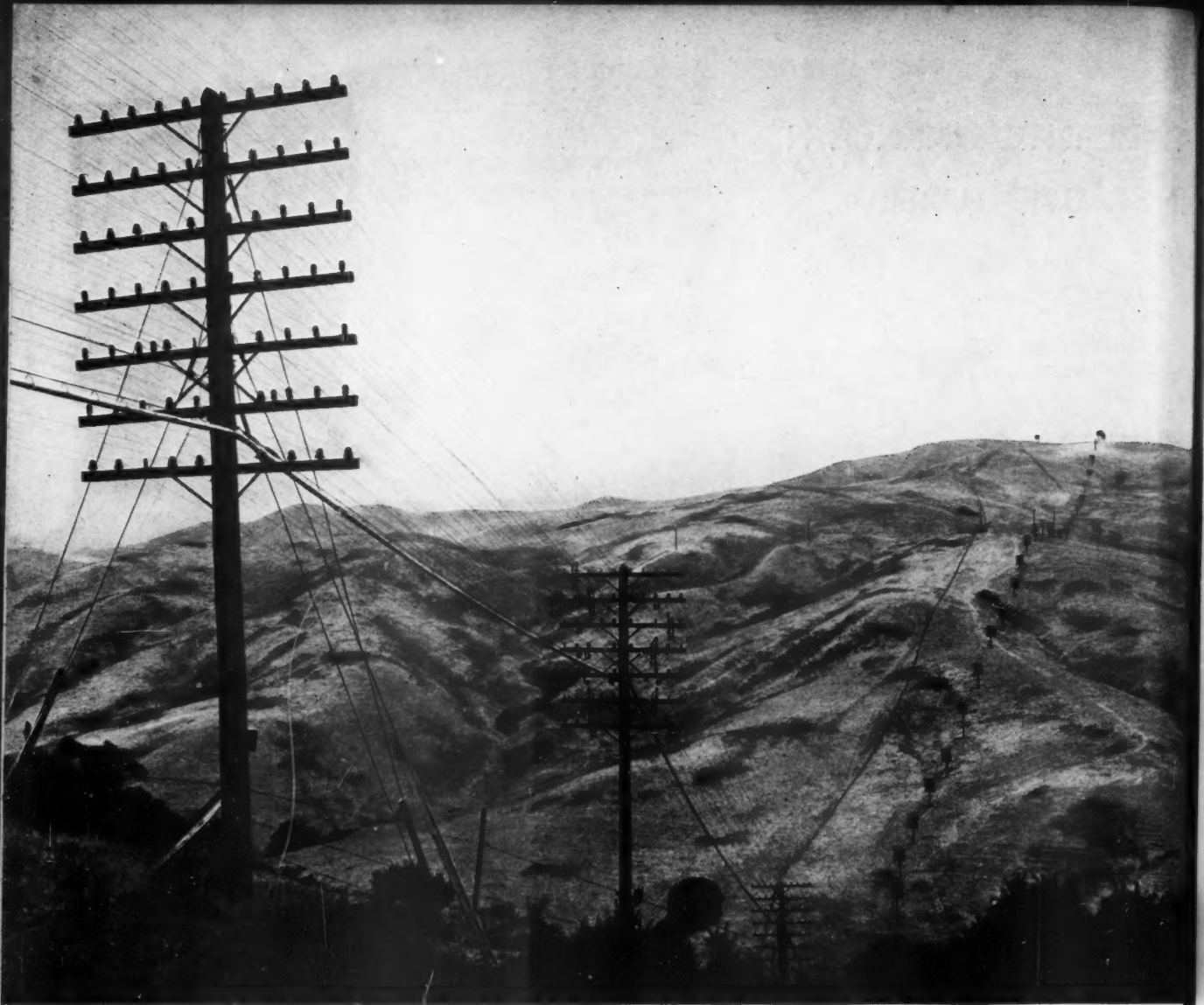
Following the storm, white clouds moved swiftly from peak to peak, shaping and moulding them into a thousand different forms. It was a spectacle that awed, that silenced, that inspired.



The gates to the Wilderness, showing the North Fork of the Sun River and Allan Ranch.

Only one room but it sheltered eighteen riders from the storm—Gates Park Ranger Station.





THE TELEPHONE INDUSTRY OF TODAY HAS BEEN CALLED THE GREATEST INDUSTRIAL ROMANCE OF THE MODERN AGE. CERTAINLY THE ACHIEVEMENT OF DIRECT WORD-OF-MOUTH COMMUNICATION STANDS AS A GREAT MILESTONE IN BRINGING AND BINDING THE PEOPLES OF EARTH CLOSER TOGETHER. IT IS WELL TO NOTE THE MAJOR PART WOOD HAS PLAYED IN ITS DEVELOPMENT. IN THE BUILDING OF SUCH VOICE HIGHWAYS AS THIS, IN THE HILLS NEAR BERKELEY, CALIFORNIA, THE FOREST HAS MADE RICH CONTRIBUTION. THE MYRIAD POLES CARRY THE TRANSCONTINENTAL TOLL LINE WHICH PASSES BETWEEN SAN FRANCISCO AND SACRAMENTO, AND ALSO THE NEW SPECIAL TOLL CABLE.

WOOD'S SERVICE TO THE TELEPHONE

By
GEORGE Q. LUMSDEN

AMONG the many forms in which wood is used in the telephone industry none is more widely conspicuous than the telephone pole. Along almost every highway and across wide stretches of mountainous and desert country where even roads do not venture extend these seriated rows that supply a large part of the communication channels of the country. Although forests in all parts of the United States are drawn upon to supply the annual demand for poles, the selection for any particular undertaking is not fortuitous but guided by a wide knowledge of the characteristics of the various woods, and of the requirements to be met. Southern pine, western red cedar, northern white cedar, chestnut, lodge-pole pine, and Douglas fir are all employed; those being chosen for any particular undertaking that are most suitable for the work required of them.

In the early days of telephony, poles were cut from trees that were naturally durable and resistant to the attacks of wood-destroying fungi and insects. Poles of cedar, chestnut, cypress, Douglas fir, juniper, and redwood, were set without preservative treatment, and many of them have made excellent life records. With the turn of the century, however, the art of wood preservation

moved forward rapidly, and through the use of preservatives less durable species of timber became available for pole-line construction. As far as mechanical properties were concerned, woods like southern pine and Douglas fir had always been considered suitable, but their lack of resistance to attack by fungi rendered them unfit for use as poles. With the development of suitable creosoting processes, southern pine in particular has become an important factor in pole production. Concurrent with this development, preservative treatment has also been applied to the butts of cedar, chestnut, and lodge-pole pine poles.

To determine as accurately as possible the effect of any treatment on the life of the pole, parts of regular pole lines have been designated from time to time as test sections so that the behavior of poles in service could be observed periodically.

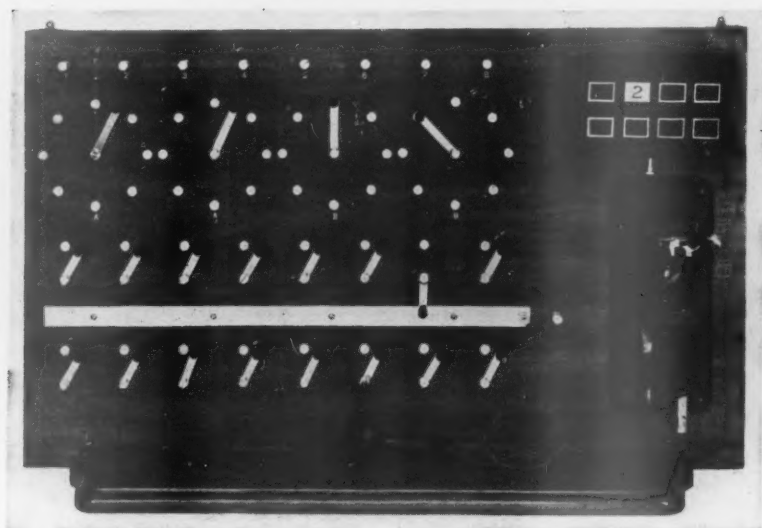
In recent years, to eliminate many variables that are ordinarily encountered in experimental sections of pole-lines, and to facilitate intensive study, approximately 1,000 specimen posts of pole diameter have been installed in test plots under the jurisdiction of Bell Telephone Laboratories. These test plots are located at three widely separated points: Gulfport, Mississippi; Limon, Colorado; and Chester, New Jersey. In each, the environmental conditions are representative of the general area in which the plot is located. The plot at Gulfport, started in 1925, is located a few feet above sea level within seven miles of the Gulf of Mexico and immediately adjacent to a typical southern bayou. The soil is a fine sandy loam overlying sandy clay. Rainfall approximates sixty inches a year, humidity is high,

and the growing season is about nine months long. Termites, or "white ants" as they are commonly called, are abundant. Experience has proved that these conditions, taken together, are very favorable to decay and insect attack, and all the experiments carried out at this plot are therefore regarded as accelerated tests.

The plot at Limon, established in 1929, is located ninety miles southeast of Denver in typical western plains country.

Its altitude is slightly over a mile, in marked contrast to the low elevation at Gulfport. Rainfall averages only fourteen inches a year and the humidity is correspondingly low. The soil is typical upland adobe, like that used in the making of prairie huts in the West. Since the growing season lasts approximately five months, decay is less rapid here than at Gulfport.

The Chester plot was established in 1930 on the site of the Field Laboratory of the Outside Plant Development Department of Bell Telephone Laboratories, thirteen miles west of Morristown. The elevation of this plot is approximately 860 feet above sea level. The annual rainfall is forty inches and the average humidity is about midway between that prevailing at the other two plots. The soil is a light-brown gritty loam overlying a yellow clay subsoil. The



Wood was once the sole insulating material of the telephone switchboard, as witnessed by this model of a board which was installed in New Haven on January 31, 1878.

growing season is approximately five and a half months in duration. Taking into account the various factors affecting decay, this plot is considered generally representative of conditions in the northeastern portion of the United States, and the rate of decay is assumed to be somewhere between the accelerated rate at Gulfport and the slower rate at Limon.

With certain exceptions, the test specimens installed in the plots are eight-foot sections cut from pole-size timber. The reasons for the use of these short sections are threefold. The most critical section of a pole, in relation to decay and insect attack, is normally adjacent to the ground line. The shorter lengths are much easier to handle whenever, in the course of inspection, the sections must be removed from the ground for sampling purposes. Another important advantage in favor of the short section lies in the fact that several specimens may be cut from the same pole for use in comparative tests where elimination of gross variables in the timber itself is desirable.

Each set of test specimens is prepared and tested in accordance with a uniform routine. Poles that conform to the specification requirements are selected from the supplier's untreated stock, and sawed into eight-foot lengths. The pole number, the section number, and the producer's identification mark are stamped by marking hammers on each piece. Sections to be used for the determination of moisture content are obtained at the time of sawing. Data relating to the physical and structural characteristics of the wood are recorded.

If the test sections are to be pressure treated with creosote, they are placed on trams and rolled into the treating cylinder for impregnation. Detailed records are made of the entire treating process. After they are taken out of the cylinder the test sections are sampled to see how much oil had been driven into the wood and how deeply the oil had penetrated. The sampling is done with an increment borer—a tool that removes a small core of wood from the surface to the center of the section. In addition, the general appearance of each treated specimen is carefully observed, and any checking and splitting of the wood that may have occurred during treatment is noted.

Sections are allotted to the three test plots in accordance with a pre-arranged plan so that each plot receives one eight-foot specimen from each pole. As a rule the sections are set to a depth of two feet in the ground. Similar procedures are followed in preparing specimens for testing other preservatives than creosote, with such modifications as are required by the preservative or method under test.

The test specimens are examined periodically, generally once a year. Upon each inspection, the exterior of each specimen is again the subject of detailed observation. Then the soil is removed from around the posts, or the posts are withdrawn from the holes, and an examination is made to determine whether any wood-destroying fungi or insects are present. If, for example, infection had been observed on a previous inspection, the progress of the casual organism through the wood is noted. The condition of the in-

terior of the post is determined by the study of the core samples taken with the increment borer; and core samples are also used periodically to find out how much preservative is left in the specimens. From the latter tests, data are obtained for calculating the rate of loss of the preservative.

When there is a question as to whether or not the specimens are infected with wood-destroying organisms, the wood is subjected to microscopic examination. Where possible, the organism causing infection is isolated and identified with the help of agar cultures. The chemical nature of the preservative, and its toxicity, are determined and when the laboratory work is completed, the data are coordinated

and consolidated with the field notes on individual cards similar to those used by physicians for their case records. The test plots are veritable proving grounds. The Gulfport experiments have already been under way long enough to demonstrate their practical value in connection with the selection of suitable material and economical methods for prolonging pole life. Non-permanent preservatives and those with inadequate preservative qualities are effectively eliminated without costly practical tests in the telephone plant.

The poles carry cross-arms fitted with pins, and on each pin is an insulator to which the wire is fastened. Wood is commonly used for both cross-arms and pins. Southern pine or Douglas fir are usually employed for the cross-arms and to prolong their life they are generally treated with creosote.

Pins must be strong and durable, and must not twist, warp, or break under the pull of the wires. Durable, untreated black locust from the Appalachian woodlands of Virginia and North Carolina is usually employed.

Although in bulk of material, wood's service to the telephone field is in the form of poles, it has many other uses which are by no means negligible. Switchboards at once occur to any who have ever visited a

telephone central office. This use of wood goes back to the very earliest switchboards. In the New Haven board of 1878, for example, a single slab of wood was used to support the crude rotary switches employed for interconnecting the few lines terminating in the office. The modern switchboards, far greater in both number and variety, are also of wood but worked into a much more elaborate form. Mahogany was widely used in the early days but more recently birch has taken its place. Mahogany and teak are used in tropical climates to withstand better the ravages of wood-destroying insects.

Wood, usually hard maple, has also been used extensively for "fanning" strips, and in some cases for terminal strips, on the main and distributing frames where all lines incoming to a central office, and trunks to the various groups of apparatus are terminated. Since wood is easily cut to any desired shape and is a moderately good insulator as well, it serves admirably for these purposes. Terminal frames of this type are usually metal structures running from floor to ceiling and extending the whole length of a central office and sometimes doubling back or bending around the end of



Before a new preservative is given an outdoor test, expert technicians in the laboratory subject its preservative qualities to tests through attack by several different kinds of fungus.

the building. On one side are vertical strips of wood carrying the terminals to which all lines are connected. Along the other side are long horizontal strips where the trunks to the central office equipment terminate. To permit any line to be connected to any of the trunks, jumper wires are connected to the line terminal strips, pass through holes in the fanning strips on which the

terminals are mounted and then pass along the frame to the desired trunk terminal. Here they are again passed through a fanning strip and connected to the trunk terminal. Wood terminal and fanning strips are used not only on main and distributing frames, but on most of the major pieces of apparatus in a central office. The fanning strips have a hole

for each terminal so that the wires may be evenly distributed and readily removed when a different connection is desired.

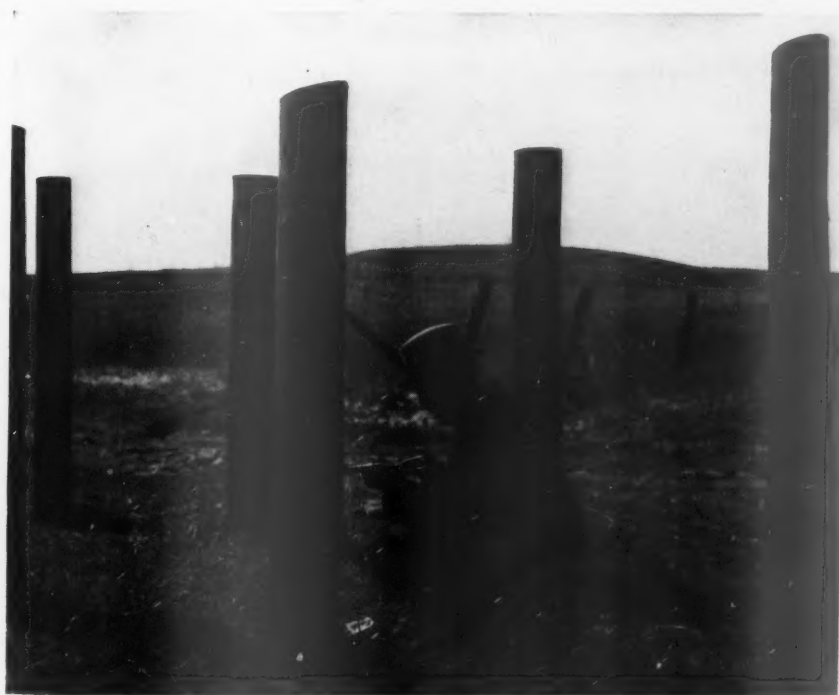
Still another use for wood, small in the individual part but large in total quantity, is for the base of switchboard lamps. Thousands of such lamps dot the fronts of every switchboard in the country, and most of them are, and have

always been, built with wooden bases. Wood is also employed in the telephone plant, in a more or less disguised form, however, in the form of pulp for insulating wires in telephone cables. Formerly paper, made from manila hemp and wound about the wire in ribbon form, served the purpose. It was made chiefly of old manila rope which had been used for ship's hawsers, tow lines, on booms, and for manifold other operations. The decline in the use of manila hemp rope brought about by steel cable threatened to curtail the already limited supply of manila, and it was realized that an alternative type of insulation might be necessary. For a while paper consisting of hemp diluted with wood pulp was used. Further extension of the use of wood pulp resulted in a new form of insulation which consists of a coating of wood pulp about the wire.

The pulp is prepared from jack pine or spruce. After having been previously chipped and cooked with a sulphate solution, it is dried and shipped in the (*Continuing on page 480*)



An interesting example of decay in the ground line section of a test post. Evidently the preservative used in this case could not prevent the havoc of decay.



Frequent inspection is made of sample pole stubs set in test plots to determine the effectiveness of preservative treatment. This sampling is done, as shown in the picture, with an increment borer—a tool that removes a small core of wood from the surface to the center of the section.

CIVILIAN FORESTERS IN FLOODTIME

Two Companies of C.C.C. Workers Build Temporary Barriers and Start Planting Program After a Raging Flood Menaces Denver

By ERLE KAUFFMAN

EARLY on the morning of August 3 a sinister black cloud settled over the upper reaches of Cherry Creek, southeast of Denver, and loosened a torrential sheet of water. A few hours later Castlewood Dam, at the head of peaceful Cherry Creek Valley, collapsed under the tremendous pressure of the cloudburst.

Instantly a wall of muddy water, fifteen feet high, raced toward the slumbering valley and the lowland sections of Denver, smashing and battering everything in its wake. The roar of its mad rampage could be heard for miles. Trees, poles, fences and structures of all kinds were swept away. Tons of debris were hurtled along at a frightful pace. Hundreds of acres of fertile lands were ruined, cattle and horses were drowned by the score, and many bridges, six within the city limits of Denver, were washed away.

The terrifying cry of "Flood!" swept down the length and breadth of sleeping Cherry Creek Valley and through Denver, the timely warnings saving many lives. Several farmers and prospectors were caught in the torrent and surrendered their lives. In many regions the flood water reached a mile on either side of the creek. In Denver a

foot of water stood on the floor of the union station. Except for the historic flood of 1864, which swept away half of the then new settlement of Denver, the torrent was the most disastrous the city has ever known.

More than 40,000,000 pounds of mud were dumped in the streets of Denver. Approximately 1,500,000,000 gallons of water, enough to make a lake eight miles square and a foot deep, passed through the lowland sections of the city. Complete devastation ruled throughout the thirty miles of beautiful valley land between the city and the ruins of Castlewood Dam. Great cottonwood trees were strewn in twisted masses of steel and large pieces of concrete. The creek bed, ordinarily less than a hundred feet wide, formed deep gorges of from five hundred to a thousand feet wide. Debris and silt covered everything.

Immediately after the flood waters had subsided, Denver and the stricken Cherry Creek Valley looked about for relief. The debris had to be cleared, lands reclaimed, the creek restored to its original channel, and, above everything, measures taken to prevent a recurrence of a flood tragedy. Another cloudburst in the headwaters of Cherry



Except for the historic flood of 1864, which swept away half of the then new settlement of Denver, the Cherry Creek tragedy of August 3 was the most disastrous the city has ever known. Upon the shoulders of the Civilian Conservation Corps has fallen the responsibility of preventing a recurrence of such a flood.

Creek before necessary protective steps could be taken would spell ruin to the valley and menace the entire city of Denver. What was the answer?

It proved to be the Civilian Conservation Corps, President Roosevelt's great unemployment relief army. Under the direction of Herbert Maier, District Officer, State Park Conservation Work, two companies of two hundred men each, all from Colorado, were rushed into action. Their tent camps arose almost over-night. Axes and saws flashed

fierce storms and heavy cloudbursts. The crest, or length of the dam was six hundred feet. Its maximum height was seventy feet above the bed of the canyon. It was of the rock-fill type, consisting of a vertical water face of cement masonry four feet thick at the top.

According to authorities, Castlewood Dam will not rise again. Picturesque Cherry Creek, having its source in the high mountains to the southeast of Denver, will be allowed to follow its remade bed undisturbed. Eventually, it is planned, a system of permanent flood control will eliminate the terrifying menace of flood waters. But until this is perfected lives and property of Cherry Creek Valley and of the City of Denver are to an extent dependent upon the resources of America's newest army of builders—the Civilian Conservation Corps.

That there is no doubting these resources is evidenced on every hand. Residents and city officials of Denver, as well as the valley farmers, have watched the Corps step into the emergency with a seriousness of purpose that demanded and gained respect. Well supervised, the young men have made remarkable strides in clearing the debris and restoring the valley to its former character. In fact, the West has come to regard the Corps in the light of what it is—an organization of builders—and its performance in emergencies, particularly in fighting forest fires, has won even the respect of its critics.



Two companies of civilian foresters—four hundred men in all—were rushed into action, cleaning up the debris, reclaiming land and planting willow trees to safeguard against another immediate tragedy.

in the bright sunshine that followed the deluge and the tangled masses of flood waste began to disappear. Under the watchful eyes of expert engineers the men, now divided into groups, began the construction of temporary flood barriers, small dams to divert and check flood water should another cloudburst in the mountains send a wall of water coursing down the creek. At the completion of this work the young conservationists will restore the creek to safe channels and bind the soil by planting the banks and remade land to willow trees.

On the banks of the stream the willows will be planted horizontally instead of vertically, about four feet apart and in trenches. In a number of years, after the trees have become firmly rooted, they will withstand ravages of raging water and firmly hold the bank in its place. On the remade land the willows will be planted vertically as is ordinarily the custom.

For more than forty years Castlewood Dam has been a storage point of water to supply the residents of picturesque Cherry Creek Valley. During its life it has withstood many



"I have seen better workers, of course," said Mr. Maier, in charge of the Cherry Creek project, "but none more willing. And every mother's son among them is glad of the opportunity to work. With that kind of spirit, and under proper supervision, there is no need to worry about the job they will turn in."

58th ANNUAL MEETING SOUNDS "NEW DEAL" FOR FORESTRY

A "NEW DEAL" for the forests of America was the keynote of the 58th Annual Meeting of The American Forestry Association, held at Franconia, New Hampshire, September 5, 6, 7 and 8. On the ground where twenty-two years ago was born the first National Forest in the East, four hundred conservationists rallied with eager expectancy to the immediate fulfillment of a practical forestry and conservation program promised under the nation's "New Deal."

In addition to The American Forestry Association seven other organizations participated in the great rally—The Society for the Protection of New Hampshire Forests, The Massachusetts Forest and Park Association, the Connecticut Forest and Park Association, The Appalachian Mountain Club, The Rhode Island Forestry Association, The Empire State Forest Products Association, and the New England Section of the Society of American Foresters.

Carrying their enthusiasm to the forest itself, the conservationists saw at first hand achievements brought about through coordinated programs of public forest development in New England, and heard their leaders picture the opportunities and means of national expansion. They heard George D. Pratt, President of The American Forestry Association, declare that under the nation's "new deal" the possibilities for forest development challenge the imagination. "With our minds cleared and our spirits uplifted we will go forward with the program of national forestry and conservation with renewed confidence and increased energy," he said.

"I believe that we are embarking on a new era in private forestry," Henry S. Graves, Dean of the Yale Forest School, and former Chief Forester of the United States, told the conference. "The lumbermen have definitely committed themselves, in their industrial code, to adopt such measures, determined to be fea-

sible in practice, as may be necessary to conserve the forest resources." One of the great objectives of forestry, he stated, is to provide industrial activities, employment that makes for home building, prosperity of communities, and strength of our rural civilization.

As to the industrial code adopted by the lumbermen under the National Recovery Act, Secretary of Agriculture Henry A. Wallace, in a message read before the convention by Dr. A. F. Woods, director of Scientific Work for the Department, hailed it as one of the most significant steps that has ever been taken in the field of forest conservation.

"It establishes sustained yield as a guiding principle of good management of commercial forest land," he said. "It is regarded as the most important development in forestry of recent years in that it opens the way toward some measure of regulation in the cutting of private forests. It strikes at the heart of the problem of forest depletion by destructive logging—a problem which has assumed a most serious aspect because of its effect upon the public welfare."

The Secretary further stated that for the United States it

is possible that our forests when fully productive may give employment to one man for every 250 acres or the equivalent of full-time work for 2,000,000 people.

"This potential earning power when supplemented with agriculture offers a substantial contribution toward the solution to the marginal land problem," he said.

The gathering heard Robert Fechner, Director of Emergency Conservation Work, declare that "Out of a national tragedy has come one of the finest developments and the most dramatic effort ever witnessed in history in any effort at real conservation. This development—the Civilian Conservation Corps—is today the most universally approved step in the general national program of rehabilitation."

Mr. Fechner, speaking at the Wild-



AT THE WILDWOOD CIVILIAN CONSERVATION
CORPS CAMP

Left to Right: Col. D. Y. Beckham, Third Corps Area, U. S. A.; H. P. Kelsey, Chairman, Wildwood Session, East Boxford, Massachusetts; Robert Fechner, Director, Emergency Conservation Work; George D. Pratt, President, The American Forestry Association; Senator Frederic Walcott, of Connecticut; and Joseph C. Kircher, Regional Forester, United States Forest Service.

wood Camp of the Civilian Conservation Corps, near Easton, New Hampshire, also greeted the gathering and several hundred young civilian foresters in the name of the President of the United States.

"I bring to you the personal greetings of President Roosevelt," he said, "whom I have the honor to represent. He feels keen personal regret because conditions today prevented him from coming to New Hampshire. He instructed me to bring you his personal greetings, his best wishes for the continued work of The American Forestry Association and cooperating organizations, and his assurance of all the support in his power to give, to the Association's program."

Opening with a banquet on the evening of September 5, at the Forest Hills Hotel, at which President George D. Pratt presided, the convention was welcomed by W. R. Brown, Chairman of the New Hampshire Forestry Commission, and a Director of The American Forestry Association. Brief greetings were also extended by Philip W. Ayres, of the Society for the Protection of New Hampshire Forests; Dr. Arthur Stanley Pease, of the Appalachian Mountain Club; Mrs. George F. Morris, of the New England Conference Federation of Women's Clubs; Mrs. John F. Heck, of the New Hampshire Federation of Women's Clubs; Andrew L. Felker, Commissioner of Agriculture of New Hampshire;

Descending to the foot of beautiful Glen Ellis Falls in the White Mountain National Forest.

Robert Fechner addressing the conservationists at Wildwood Civilian Conservation Camp. Six hundred people heard him.

and Karl D. Scates, representing the lumbermen of New Hampshire. At the conclusion of the greetings, Philip W. Ayres paid a stirring tribute to (*Continuing on page 470*)



At Long Pond Wild Life Development where the C. C. C. is reclaiming an old beaver lake for restoration of fish and wild life as well as recreation.

At Willey Camps in Crawford Notch, the site of the old Willey House, destroyed by a landslide in 1826.





EDITORIAL

The Mining Racket

ROBERT W. AYRES, in his article "Racketeering the Outdoors," reveals a perversion of the mining laws applicable to public lands that ranks with other modern rackets. Not only is this racket costing the American people millions of dollars, but it is in direct defiance of all public interests and the development of public properties for the use and enjoyment of all the people. It is a situation that Congress should have rectified long ago but has not. Stealing public lands or controlling them under the guise of hidden minerals somewhere below their surface is not a new racket. It has been going on for years, but it has become more acute, more diversified and more extensive in the past decade than in all the years preceding, due to the growing value of our public lands for purposes other than mining. It is today a lone and vivid throw-back to the old freebooting days of the West half a century ago.

As our mining laws now stand, the way of the mining racketeer is simple and easy. The law gives him or anyone else the right to locate mining claims on Government land in the Public Domain and the National Forests, and location, properly made, gives him possessory rights. Whether or not he ultimately obtains title, he is regarded legally as the actual owner. There is no limit to the number of claims an individual or corporation may locate, and the locator is not required to secure patent in any given time. He may hold the claim for the remainder of his life, unless his right to it can be disproved through long drawn out and expensive procedure on the part of the Government, or unless it is abandoned and relocated by someone else.

The mining laws under which he operates were enacted more than sixty years ago when the public lands of the West were considered valueless except for possible minerals below their surfaces. At that period in our national life the value of the public lands for watersheds, for the growing of timber, for the grazing of livestock, for the recreation of all the people and for other public benefits, was little dreamed of and little appreciated. During the past decade or two, however, these values have assumed places in our social order that dim into insignificance the uncertain and usually unfound minerals which our antiquated mining laws presuppose exist under each surface acre.

These new values inherent in the public lands and the ease with which mining claims can be located and used to control strategic areas have, therefore, generated a swarm

of prospecting fakers and shyster lawyers whose game is not to promote legitimate mining but rather to locate areas by which they can hold up the public and exact tribute. Land required for public works, such as roads, dams and reservoirs, is often preempted by these fake miners immediately a project is discussed. Almost every activity of the Forest Service in its administration of the National Forests may be subject to hold-up by mineral locations made with the obvious intent of "shaking down" forest users. Of special concern to outdoor-loving America is the effect of the nefarious practice upon the public's use and retention of its own recreational resources in the National Forests and the Public Domain. Areas particularly adapted to camping, and areas which control fishing waters, are considered "rich dirt" by the racketeer miner, and in the great recreation State of California at least he has developed an uncanny craftiness for discovering in advance areas that will be in demand by the public. As a result, the benches for hundreds of miles along many of the State's best mountain streams have been covered by mining claims, whose claimants either obtained title by some hook or crook and sold out to private fishing clubs or, failing in this, are charging the public for camping on their posted claims.

For years the Forest Service has waged a campaign against this racketeering traffic, but as long as the mining laws remain unchanged, the Government is powerless to control it effectively. The practice, however, can be easily and quickly brought under control by Congress modernizing the mining laws to meet present day conditions. Immediate action has become imperative if the vast public works contemplated by the Public Works and the Emergency Conservation Acts for reclamation and development of public lands are to be effectively carried out and protected. Immediate action has also become necessary if many of the choicest outdoor playgrounds remaining to the American people are to remain in public ownership or available for free public use.

Legitimate prospecting and mining have proper and important places in our western country, but when the laws under which they operate become so loose and out of date as to permit irresponsible adventurers to hold up and rob the public of its rights to its own playgrounds and other natural resources, it is time for the public to step in and demand that Congress act.

A FOREST PAGE FOR BOYS AND GIRLS

A "NUTTY" SHOW

By WILLIAM B. ASHLEY

Photographs by courtesy of the U. S. Department of Agriculture

YEARS ago, there were three really worthwhile reasons for playing hookey from school—one to catch a few fish, another to see that the elephants got their peanuts when the circus came to town, and the third to answer the autumnal call of the nut trees. No boy with a heart could turn a deaf ear to this call, and few did.

But today the picture has changed somewhat and most boys do their "nutting" in a handy store. For nutting now is a business. The trees are carefully grown in orchards and the nuts harvested by expert workmen. If they have thick outer shells they are put through machines which not only remove them but actually clean, color, polish and grade the nuts. They are then shipped by trains and boats to thousands of markets.

And years ago, during the "hookey" days, we were content with a few varieties of nuts, most of which were grown in our own woodlands. But today more than two dozen kinds of nuts are on the market—nuts from China, from France, from Turkey, from Africa, from Australia, from practically every country where trees will grow. Millions of pounds are put on the market every year.

Mother Nature, like all good mothers, has her enigmatic moments when she arouses suspicions of being what is inelegantly called "cagey." And when she produced some of the nut-bearing trees she certainly let herself go a bit. For suppose that she had decided to fool us into taking as nuts what really are peas, or plums, or beads, or stones. Suppose some nuts were humorists, man-killers, acrobats, wizards, sleight-of-hand artists. What then? Couldn't we group such nuts into a vaudeville company, and let them perform for us—right now, say? Very well, then, the curtain rises and we now shall see a cracking good act, put on by those popular favorites, the peanut family, from Africa. Some time before the Civil War

adventurous members of this family had come to the United States craftily concealed in the scanty clothing worn by slaves who were being sold here. Some of the peanuts took root in the South, and during the war soldiers of both armies introduced them to their friends in the North and South.

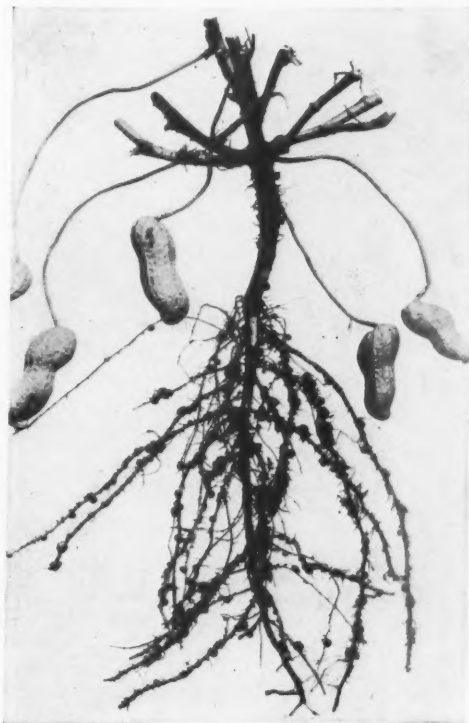
One trick of the peanuts is to pass themselves off as nuts,

whereas they are merely peas. The second trick consists in fooling most of us about the way they grow. The pod, which eventually may contain from one to three peas, first appears on the plant as a bright yellow blossom. Presently the branches bend downward and bury their ends in the ground, where the peanuts ripen and are dug up, like potatoes. Some nut dealers will assure you that the peanuts grow, like potatoes, on the roots of the plant. You have only to pinch a peanut-shell between your fingers, to hear a crackle of laughter at such an idea! As an encore to their act the peanuts—variously called ground nuts, goobers, pindars and monkey nuts—pretend they are butter. This is a popular trick, although somewhat difficult to laugh at when you are eating crackers and peanut butter.

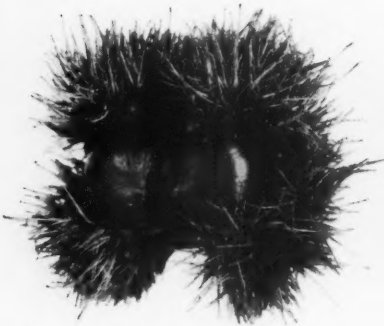
As the low-born peanuts leave the stage, the highest born nut in the profession, the *Castanha do Para*, stalks on. That is its stage name, but Bostonians shorten it to "castanha," Philadelphians change it to "creamnut," Southerners contemptuously call it "niggertoe," and New Yorkers name it the Brazil nut.

The stage has been set for the Brazil nut team's tumbling act, to resemble a dense jungle dotted with gigantic trees 100 to 150 feet high, with umbrella-like

masses of leaves at the top. It is October as the act begins, and the fruits appear under the leaves, as clusters of small white blossoms. The curtain drops and a voice announces that fourteen months have passed, so now it is December of the following year. Up goes the curtain, and the act begins



A popular favorite from Africa, the Peanut, makes its bow. It loves to fool the public into thinking its fruit grows on its roots, whereas its branches bury their noses in the ground, and lo and behold the peanuts ripen on their ends—ready for the harvest!



In a gown of gleaming brown satin protected by a prickly coat of burs, the Chestnut, growing steadily more rare, makes her bow.



The Brazil Nut, aristocrat of the jungle and social leader of the Christmas nuts—makes his dramatic appearance from within these great bombs, as they crash to the forest floor.



The Pecan takes its proud position as the principal native nut now grown in large orchards in the United States.

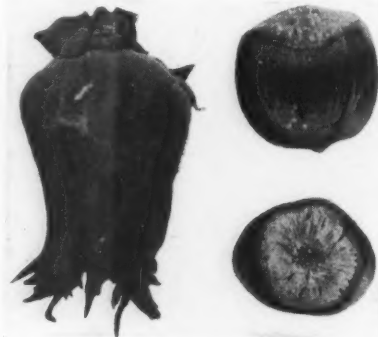
in dead earnest. The blossoms have become full grown fruits and are concealed, twelve to twenty-two at a time, inside huge outer shells, or casks, something like an unhusked coconut in shape and size. On the jungle floor below, many natives who live in the forest are gathered near rude shacks, glancing anxiously upward and evidently waiting for the wind to cease blowing. Up above, the great fruits hang precariously, waiting for a native to venture underneath, when one "cannon-ball," as the natives feelingly call them, lets go and charges with the speed of light to land neatly on the head of the unwary native.

The finale of this act should bring a relieved smile to your face. Between winds the natives, singing wild songs of elation, pitch the fruits onto piles, and when all of them are down they fall upon the fruits with machetes and hack the cask apart, throw the liberated nuts into baskets, load them on their heads and carry them to the banks of streams to be floated to the warehouses, from whence they are shipped to the United States and other countries. The neatest part of this act is hidden; it is the way these iron-shelled Brazil nuts arrange themselves, in circular rows, inside these great ebony-hard containers.

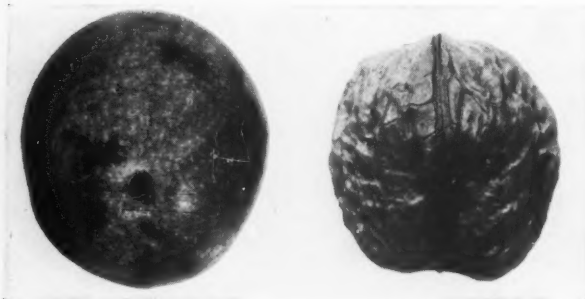
A first cousin of the Brazils has perfected a legendary act that has given it the name of monkey-pot. Its correct name is *Zabucajo* or *Sapacaia*. This nut, though daintier than the *Castanha do Para*, is seldom sold in the United States. It,

too, performs high in air amidst the jungle. Being smaller than the Brazil nut, a quart or so grow inside a thick cork-like outer shell shaped like a squat urn, six to eight inches across at the bulge. This urn has a hinged lid over its three-inch opening. When the *Sapacaia* are ripe the lid opens and the "team" spills on the ground below, to be carried off by the monkeys, with cries of delight.

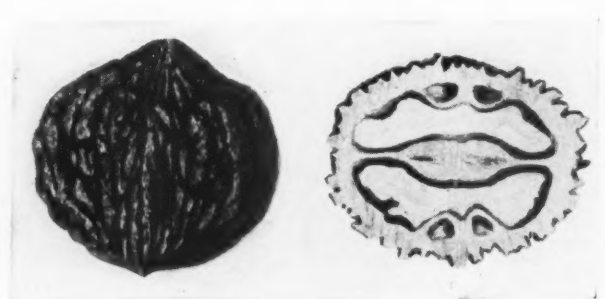
Now we are to see a series of disappearing acts, put on by a trio of nuts, the *Coquilla*, the *Tagua* and the *Jicarra*. The *Coquilla* nut is able to flex its muscles until they are so hard that the nut is used for making door knobs, umbrella handles and other more or less useful articles, right before your eyes, almost. Next the *Tagua* nut proudly announces that inside he is merely milk; then, by some trick known only to himself, he begins to solidify the milk until it becomes like ivory, whereupon it is sawn into slabs, then soaked in water to soften it so that it may be "turned" readily, and stamped into various



The Filbert, or Hazel—first imported—is now a naturalized citizen of the United States and takes an important part in the nutrition program of the nuts.



The next performer in this "nutty" show is the English Walnut—not "English" exclusively but Persian in origin and the only nut that wears a diamond.



His cousin, the Black Walnut, puts on a great act for the boys and ushers in lots of fun, despite his shell which is so hard to crack.

shapes and designs of buttons. All these nuts, by the way, are citizens of South and Central America. Senor Jicarra, a very large nut, allows fire to be applied to his shell, harmlessly, it happens. Then he disappears as a nut and reappears as an empty shell and becomes a great kettle, or a huge drinking cup, or some other article useful to busy housewives down that way.

A door knob, a button and a kettle make their bows, and a tung oil nut from south China and the Philippines rolls across the stage, stands silently for a moment, and then suddenly becomes a varnish, which is used for water-proofing shoes, clothing, paper umbrellas, baskets, junks and other things. We use this nut in America in making varnish, enamel paint, oilcloth and linoleum. Now the stage is set to represent a bit of the West Indies. A large evergreen tree, belonging to the same family as our poisonous sumac and ivy and equally dangerous to handle, stands down center. This is the *Cashew* nut. Now, all other nuts of the fruit pit variety invariably are fully clothed with luscious fruit, but Miss Cashew scorns clothing. One end is embedded in the blossom end of the fruit, wrapped only in a thin brownish double-shell. When the fruit is ripe Miss Cashew is made perfectly safe to handle by roasting and removing the shells. This occurs long before the kernels are started on their way to foreign markets. Although native to the West Indies, the world's markets are now chiefly supplied from India.

The next nut on our program, the Persian (English) walnut, appears solely as the only nut that wears a diamond. Incidentally, and despite his common name, he has no knowledge of any nut of his family who lives in England, and does not clearly understand how he came to be called an English walnut. He has family connections, however, in Persia, France, Turkey, Rumania, Spain, Yugoslavia, Albania, Italy, Greece, China and in America. If pressed he will admit that the Greeks call him the *Basilicon* or Royal nut; the Romans styled him *Juglans* from Jovis and Glans, and meaning "Jupiter's acorns and the Nuts of the Gods."

It is the Persian walnut, extensively grown in California, that wears a diamond. You must have seen the jewel on the proud chests of these nuts. People from all over the world competed in offering ideas for a machine that would stamp this trade-mark on the nuts,—and for the \$10,000 reward paid to the winner in this contest by the California Walnut Growers' Association. The superb dignity of the walnut family must suffer somewhat as they race under that stamping machine at the rate of 2,016 nuts a minute!

And now we see another artist, and a very popular one,—the pecan nut. This is a native North American nut whose well known high standards have been developed largely by selection. The pecan is under cultivation over practically all of the cotton belt.

At this point in our vaudeville nut performance there will be a brief intermission, to be followed by our closing num-

ber, an astonishing, astounding and aggravating accumulation of things that come out of just one nut. This act will be put on by two men, one of whom knows what he is talking about. While we wait, our announcer will say something about nuts in general.

"Ladies and gentlemen, of the hundred or so nuts known to the trade, only fourteen different kinds are used in this country as table nuts. Of these, the filberts or hazels, almonds, peanuts and walnuts were first imported and now have become naturalized and are grown here. Nuts native to the United States, as well as to some other lands, are the beechnut, black walnut, butternut, chestnut and the hickory nut. The pecan is the only nut grown only in the United States—unless you think of the tiny, three-sided *Castanopsis*, or Golden Chinquapin, as a nut. The Chinquapin, like the little pig that stayed home, is too small to go to market. The table nuts imported here from other countries are the almond, Brazil, cashew, pignolia and the pistache.

"Nuts are not merely winter-time tidbits, they are an all-year article of nutritious food. One pound of pecan nut meats, for example, contains as much food value as do two pounds of pork chops, or three pounds of salmon, or five pounds of veal, or two and a half pounds of turkey. Now, what would it mean to our busy butchers if every American family were to place three pounds of pecan nuts on the table this Thanksgiving Day, instead of a tender, seven-pound turkey merely dressed with chestnut stuffing? It also is claimed that a pound of shelled peanuts furnishes about 2,700 calories, as contrasted with about 850 calories in a pound of juicy beefsteak.

"Wherever man first trod this earth, nuts were probably his first form of food. Many savages today depend upon nuts for their sustenance. Chestnuts are widely used as food in France, and are

served in place of potatoes in Korea, where the walnut also is a regular article of diet. Vegetarians point to the lithe and active squirrels, intensive nut-eaters, and recommend a diet of nuts for reducing our weight and increasing our agility."

Just in time to save us from getting into a controversy, the lights go out and the curtain goes up, disclosing a bit of seashore on which sits an interesting looking man chatting with a nearby swimmer who, at the moment, is soaping his arms and shoulders.

"Wonder what this soap is made of!" he shouts. "Only soap I ever knew to lather in salt water!"

"That soap," says his friend on the beach, "comes from a nut used by natives of the South Sea Islands for dippers, and for making screens, mats, baskets, brooms, dishes, pens, breech-cloths and fly-swatters, to say nothing of the milk they get from it.

"Well, well!" applauds the swimmer, extracting some soapsuds from one eye, "anything else come out of this useful nut?"

"Yes, indeed," replies the well- (Continuing on page 468)



The act of the Coconut—most important of the household nuts and the meanest of all to crack—is so long and so full of astounding feats you will have to read about it as the author tells it in his story of this "nutty" show.

CHESTNUT

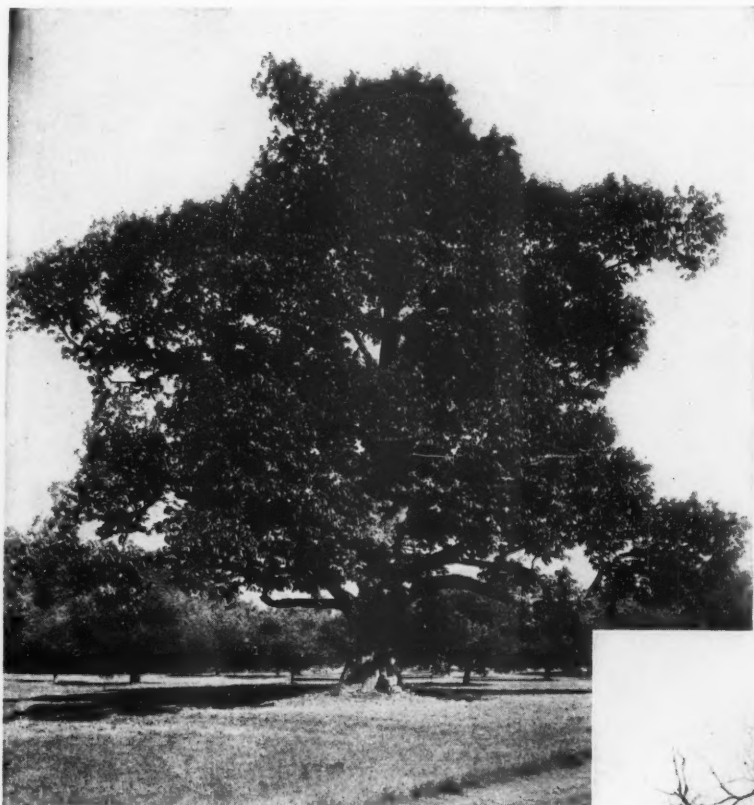
Castanea dentata, (Marshall) Borkhausen

THE American chestnut, which has given joy to so many people, is practically doomed by a disease, but continues sufficiently important to command attention among American trees. Before the chestnut blight gained its present headway, chestnut was found from southern Maine through-

out the northern States to the foothills of the southern Appalachian Mountains and west as far as southern Michigan through Indiana to northern Mississippi. Suited to a variety of soils, chestnut attains its greatest size on well drained slopes in western North Carolina and eastern Tennessee. Here trees a hundred feet high with trunks five and six feet in diameter are found, and trees sixty to eighty feet high are not uncommon. The tapering trunk divides into several horizontal or ascending branches to form a broad, somewhat pyramidal head.

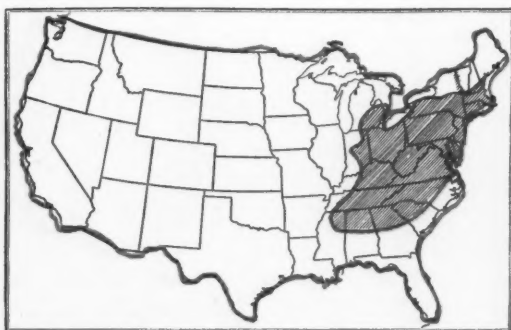
Commonly called American chestnut, and sometimes sweet chestnut because of the nut, the Indians of central New York called it "O-heh-yah-tah," or prickly burr. *Castanea dentata*, the scientific name, includes the Latin name for chestnut and refers to the tooth-like notches on the margins of the bright green leaves.

The long catkins of male flowers appear during late June and early July as buff-colored streamers over the trees. Less conspicuous fruit-bearing flowers develop simultaneously on the new wood of the same trees, and in a few



Open grown American chestnut develops a broad, somewhat pyramidal crown, supported on a short thick trunk.

The leaves fall in October and November to reveal the tapering trunk and sturdy horizontal or ascending branches.



Natural Range of Chestnut in the United States.



weeks prickly green burrs appear. These become two to two and one-half inches in diameter by the end of August, and ripen during October and November, when the prickly covering splits open and reveals one to five dark brown sweet-meated nuts within a velvety case.

The dark grayish brown bark of mature trees is one to two inches thick, hard and deeply cleft to form broad flat ridges. That of young trees is smooth, often shining, and of a purplish brown color. It is an important source of tannin for the leather industry.

The buds are bluntly pointed, chestnut brown, alternate on the branches, and borne singly at the ends of the twigs rather than clustered as with the oaks. The leaves are simple, five to ten inches long, narrow, toothed, and smooth on both sides. A cross section of a twig reveals a star shaped pith.

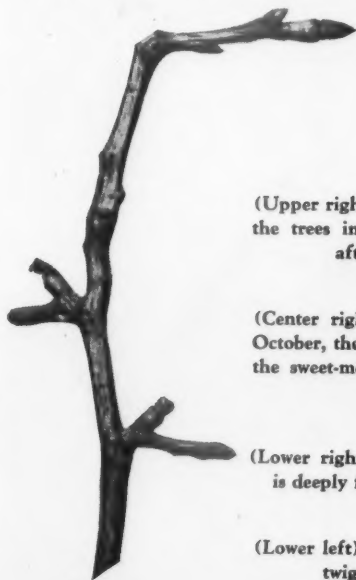
Chestnut reproduces from sprouts as well as from seeds. When cut or killed by fire or blight, chestnut trees sprout vigorously from the stump, which results in groups of two or more trees. In blight infested areas the roots and stump of dead or felled trees annually produce sprouts which live for a year or more before they in turn are struck down by the disease.

The wood is reddish-brown with light colored sap-wood. Although coarse, light, soft and relatively weak, it is useful for structural purposes, for interior trim, for fence posts, ties, pulpwood and fuel, as well as for furniture, packing cases, and crates. Superficially resembling oak but without prominent medullary rays, a cubic foot air dry weighs only about thirty pounds. Similarly it lacks the strength of oak. The ability of chestnut wood to resist attacks of wood destroying fungi encourages its wide use for fence posts, fence rails and railway ties.

Were it not for the chestnut blight this tree would rank among the more important commercial and horticultural trees of the eastern States. It continues important in the mountains of West Virginia, Virginia, North Carolina, Pennsylvania and Tennessee, but there is small hope that it will be a permanent source of forest products. The total cut of chestnut lumber in 1930 was 150,846,000 board feet. The sweet chestnuts have long been used for food and are a source of income to many farmers, while tannic acid, used for tanning leather, is secured from the wood.

The chestnut blight, a fungus disease imported from Asia before this country had enacted plant quarantine laws, was first recognized in New York City in 1904. Since then it has spread rapidly over New England, New York and along the eastern slopes of the Allegheny Mountains and into the southern Appalachians.

There are other enemies of the chestnut but in comparison with the blight they are all of secondary importance. No adequate method of control has been developed, and in spite of constant search, no strain of blight-resistant American chestnut has been discovered.

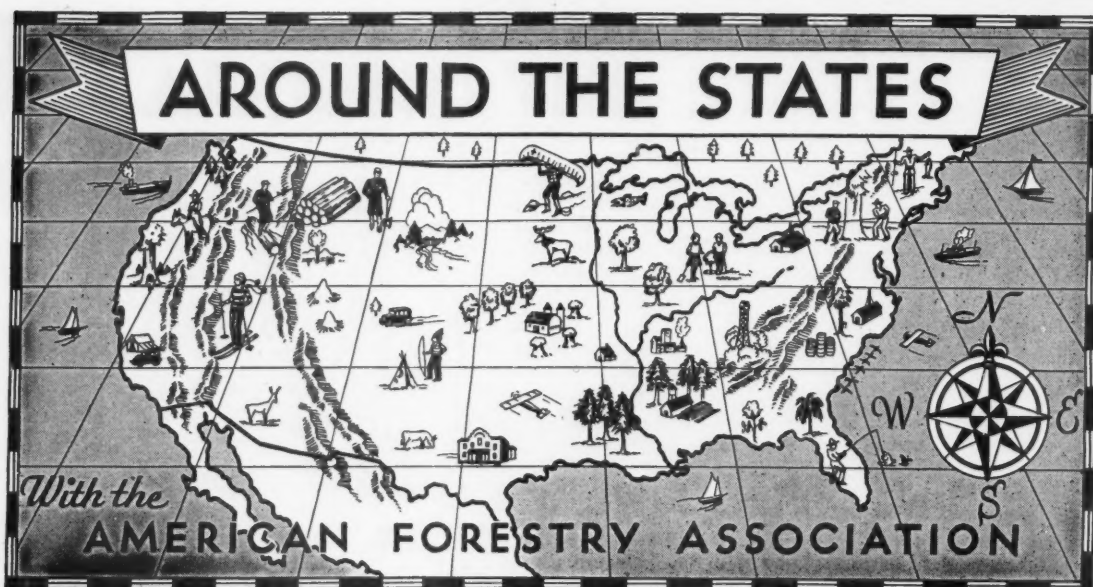


(Upper right) Long streamers of male flowers deck the trees in June and July, nearly two months after the leaves have appeared.

(Center right) Before the leaves have fallen in October, the prickly burrs have turned brown, and the sweet-meated chestnuts have burst from their velvet lined case.

(Lower right) The gray-brown bark of old trees is deeply fissured to form broad smooth plates.

(Lower left) The winter buds are alternate on the twig, bluntly pointed and smooth.



Civilian Conservation Corps to Continue Another Six Months at Full Strength

President Roosevelt has ordered the continuation of the Civilian Conservation Corps, at its maximum strength of 300,000, for another six months. He has also approved the construction of more than 570 new camps, chiefly in warmer climates, for work throughout the winter, and the improvement of nearly 900 old camps.

The President's order provided for the discharge of the 300,000 members of the Corps, beginning September 30, and the immediate enrollment of new members and re-enrollment of those now serving. All men discharged will be given an opportunity to re-enroll immediately. All of those not desiring to re-enroll will be transported to the Army camp at which they were conditioned and then discharged. There will be no interruption in work for those remaining in the Corps for another six-month period.

Steps to enroll new members throughout the various states will be taken immediately figures are available showing the number of replacements needed. It is estimated by Robert Fechner, Director of Emergency Conservation Work, that not less than 100,000 men will retire from the Corps to accept new jobs or for other reasons, leaving a quota of 100,000 to be filled by new men. Arrangements for selecting all replacements, with the exception of veterans, which is handled by the Veterans' Administration, will be made, as before, by the Labor Department.

Members of the Corps, it was pointed out, will not be allowed to return home for a period and then return to the Corps if they fail to secure employment.

Under the new program, approximately 250,000 men will be moved by rail or truck during October, November and early December. This will include return of men to their homes as well as the movement of nearly 570 camps of 200 men each to warmer climates and the movement of new men selected to fill vacancies in the Corps.

Arrangements are also being made



OVID BUTLER

MARKING THE TENTH YEAR OF HIS SERVICE AS EXECUTIVE SECRETARY OF THE AMERICAN FORESTRY ASSOCIATION AND EDITOR OF AMERICAN FORESTS, HIS MANY FRIENDS AND ASSOCIATES PAID DESERVED TRIBUTE TO HIS OUTSTANDING WORK AS A LEADER IN THE FIELD OF FORESTRY DURING THE RECENT SESSIONS OF THE 36TH ANNUAL MEETING, HELD IN THE WHITE MOUNTAINS, WHEN THEY PRESENTED MR. BUTLER WITH A BEAUTIFUL WATCH, A BRONZE DESK SET AND A PORTFOLIO CONTAINING THEIR PERSONAL EXPRESSIONS OF APPRECIATION AND ESTEEM.

for the movement of men from all abandoned camps to new camp locations. This includes movement of from eighty to ninety camps in September, approximately 240 in October and the balance in early November. Steps are now being taken to select the new sites for camps which must be abandoned, more than 200 already having been approved. Mr. Fechner stated that 2,000 applications recommending new sites have been received from governors of the states desiring additional camps. While definite plans for the abandonment of camps now occupied have not been completed, a preliminary survey has shown that nearly 300 camps in the Ninth Corps Area are unsuitable for winter occupation. Other corps areas together with the number of camps found unsuitable for winter use are: First Corps Area, fourteen; Second Corps Area, twenty-one; Third Corps Area, seven; Fourth Corps Area, eight; Fifth Corps Area, five; Sixth Corps Area, one hundred; Seventh Corps Area, thirty-one, and the Eighth Corps Area, sixty-five.

Wherever possible, new camp locations will be made in the same area where camps are abandoned.

At the time of going to press, the following camps had been approved for the new six-month period:

Alabama, four; Arizona, seven; California, twenty-six; Colorado, two; Florida, two; Georgia, one; Illinois, thirty-three; Indiana, five; Iowa, nine; Kansas, one; Kentucky, seven; Maine, three; Massachusetts, nine; Michigan, eight; Minnesota, three; Missouri, nine; New Jersey, twelve; New Mexico, one; New York, twenty-eight; North Carolina, four; Ohio, fourteen; Oklahoma, eight; Oregon, two; Pennsylvania, six; South Dakota, two; Tennessee, ten; Virginia, thirty-three; Vermont, five; Washington, nine; and Wisconsin, five.

In addition, twenty-five full strength camps have been allotted to the Tennessee Valley Authority for work in connection with that vast project.

Verne Rhodes Appointed Public Works Forester

Verne Rhodes, of Asheville, North Carolina, well known forester, early in September was appointed Engineering Examiner on Forestation Projects of the new Public Works Administration. He will direct the examination of all applications for loans under the provisions of the Administration for the development of forestry projects of an industrial character, as originally provided under the Reconstruction Finance Corporation.

A graduate of the famous Biltmore Forest School, at Asheville, Mr. Rhodes has been engaged in forestry work for many years. Before entering the United States Forest Service in 1910 he was associated with a number of lumber companies in the South and West. With the Forest Service he was chiefly active in examining land purchases in the southern Appalachians under the provisions of the Weeks Act, and later served as Supervisor of the Pisgah National Forest and Game Preserve, in North Carolina.

In 1926 he resigned from the Service to engage in private work, but in 1927 accepted the position as Executive Secretary of the North Carolina Park Commission, which was active in acquiring lands in North Carolina to be included in the Great Smoky Mountain National Park. With this work completed in 1931 he returned to private practice. Later he was made a member of loan and trust committees of the Wachovia Bank and Trust Company, at Asheville, resigning to accept the position he now holds.

University of Wisconsin Establishes Game Management Department Under Direction of Leopold

Establishment of a game management department which during the next five years will endeavor to develop and apply methods of raising "crops" of game birds and animals as part of regular farming operations has been announced by the regents of the University of Wisconsin, at Madison.

Aldo Leopold, forester and nationally known conservation authority, will direct the project as tenant of a chair of game management, financed by a grant of the Wisconsin Alumni Research foundation to the College of Agriculture, according to Dean Chris L. Christensen.

Mr. Leopold also will be director of the new University of Wisconsin Arboretum and Wild Life Refuge, adjacent to Lake Wingra on the outskirts of Madison.

University and foundation officials expressed hopes that Mr. Leopold's research, aided by technical cooperation of other university departments, can integrate the best methods of growing game with the best methods of growing other crops, so that every farm can produce game as a by-product or regular farming.

It is also hoped that the integration of game management with forestry will provide an additional inducement for conservation practice on marginal and tax-reverted lands.

The farmer, said Mr. Leopold, who now is natural custodian of state-owned game which ranges his land, will be encouraged deliberately by the plan to become the manager of pheasant, quail, grouse, rabbit, ducks, and other wild life for their recreational and economic values.

Mr. Leopold, author of the only American text on game management, was associate director of the Forest Products Laboratory, at Madison, for four years until 1928, when he began a two-year national game survey for the arms and ammunition industries and supervised game research at several colleges.

Following completion of courses in the Sheffield Scientific School and the Yale Forest School, Mr. Leopold was for fifteen years in the United States Forest Service in the Southwest, retiring as chief of operations.

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The superiority of these new shells is due largely to better control of shot string, or lag. Driven by a new progressive burning powder load, every shot pellet has higher speed, more drive and punch. Winchester shot string control is their flight commander. Instead of permitting them to string out until at the standard patterning range of 40 yards they form a procession 20 feet long, it holds them within a quarter of that distance. So that at 50, 60, 70 yards and over, Winchester Super Speed Shells give as effective pattern, penetration and desirably short string, as the best standard shot shells at much shorter ranges.

Buy them for pass, timber or open water shooting at far-off big ducks. For geese, brant, prairie chickens, pheasants, long-range doves. For turkeys, foxes, deer (bucksshot or single ball). In 410 gauge, the new 3-inch with double shot charge, killing at 35 yards, and more!

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Forestry Tools of Every Description

Wallace Fixes Date for Lumber Code Conference

Secretary of Agriculture Henry A. Wallace, has designated October 24, 25 and 26 as the dates of the initial conference provided for in Article 10 of the Lumber Code. The meeting will be held in the Administration Building of the Department of Agriculture at Washington. Secretary Wallace will act as Chairman and Henry S. Graves, Dean of the Yale Forest School, has been designated Vice-Chairman of the conference.

Article 10 of the Lumber Code deals with conservation of forest resources and commits the industry under the National Recovery Act to take such steps as may be necessary and feasible "to conserve forest resources and bring about sustained production thereof." The article as approved by President Roosevelt made it mandatory upon the industry to request the Secretary of Agriculture to call a conference at which representatives of the Government, the lumber industry and public conservation agencies might participate in formulating recommendations for conservation practice under the Code. Article 10 requires

the industry to submit such recommendations to the President as promptly as possible to be incorporated as supplements to the Code.

The organizations which will be invited to send representatives to the conference have not been named, but it is understood that Government, public and conservation agencies will number approximately eighteen representatives, and the lumber, pulp and paper and naval stores industries approximately sixteen representatives. Although the Lumber Code does not apply to farm woodlots, Secretary Wallace, upon the request of the lumber industry, has agreed to invite farm woodlot representation at the conference. The industry holds that the aggregate of farm woodlots is entirely too large a factor in the lumber trade to be ignored, and that unless woodlot operations are made to conform to Lumber Code practice, the way will be left open for extensive chiseling on the part of wholesalers who market woodlot products.

The conference on October 24, it is understood, will be preliminary to a later and final conference to be held sometime in December.

Forest Acquisition Progressing Rapidly

Expansion of the National Forest System in the eastern states is going forward at a rapid rate, as a result of the \$20,000,000 which President Roosevelt allocated last spring for land acquisition in the East. Since June 9, almost one million acres have been either purchased or are in the process of purchase. The cost of these new additions will be slightly less than \$2.00 an acre, which the Government considers a very advantageous price. The newly purchased areas will bring the total acreage of eastern National Forests to approximately 5,700,000 acres.

Another notable development in the acquisition work is the recent approval by the Secretary of Agriculture and the National Forest Reservation Commission of an extensive series of new purchase units in addition to existing units whereby the area to be purchased is increased by approximately six million acres. This development will mean National Forests for two states in which there are now no federal forests; namely, Missouri and Illinois. It also extends purchase areas

in a number of other states. Of the approved new units, four are in Mississippi, four in Missouri, two in Illinois, one in Florida, one in West Virginia, one in Michigan, one in Minnesota, and one in Puerto Rico. The approved additions are to the Marquette, Hiawatha, and Ottawa Units in Michigan, the Superior and Mesaba Units in Minnesota, the Ozark Unit in Arkansas, the Alabama Unit in Alabama, and the Catahoula and Vernon Units in Louisiana.

In allocating \$20,000,000 of Public Works Funds to forest acquisition, President Roosevelt recognized the need of more National Forests in the East in order, among other things, to give effective use to the Civilian Conservation Corps. The incomplete condition of the eastern forests seriously hampered the placement of conservation camps when that work began, and widely intermingled private lands militated against orderly prosecution of necessary work and limited the activities available. The \$20,000,000 available for the purchase of additional lands has completely changed the picture.

Ward Shepard to Advise on Forest Policies of Indian Service

Ward Shepard, of Washington, D. C., has been appointed as special advisor on land and forest policies to the Commissioner of Indian Affairs. In this work, he will study the problems of land use, forestry, erosion, grazing, and irrigation of the Indian Service, formulate long-time policies for the constructive handling and development of the Indian resources, develop new administrative practices in land management, and prepare fundamental legislation in these fields. Coupled with these fundamental reforms in Indian land management will be the development of a program of inducing the Indians themselves into the management and operation of their agricultural, grazing and forest lands. He will also act as special advisor to the Secretary of the Interior on land and forestry problems.

Mr. Shepard's work in these fields will be a basic part of the general program of the new Commissioner of Indian Affairs, John Collier, to halt the long dissipation of the Indian lands and resources and to build up the Indian forests, grazing lands, and farm lands for per-

manent production.

During the past two years Mr. Shepard has been in Europe, engaged in an extensive investigation of forest policies in Germany, Austria, and Czechoslovakia for the Carl Schurz Memorial Foundation of Philadelphia. He gave special attention to the administration of regulatory laws, the sustained management of large private forests, the organization and methods of forestry extension, cooperative and association forestry, and the general organization and leadership of the forestry movement.

During the past summer Mr. Shepard called to the attention of the Administration the need of including provisions against destructive forest exploitation in the code of Fair Competition of the Lumber Industry and was actively engaged in bringing about agreement between the industry, the government, and conservation agencies on the basic conservation principles of the Code and on the scope and organization of the forthcoming conference called by Secretary Wallace to effectuate these principles.

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Ask the Forester?

Forestry Questions Submitted to The American Forestry Association, 1727 K St., N. W., Washington, D. C., Will be Answered in this Column. A Self-Addressed Stamped Envelope Accompanying Your Letter will Assure a Reply.

QUESTION: What is Queensland walnut? Is it similar to American black walnut?—W. R. C., New York.

ANSWER: Queensland walnut is not a true walnut, but according to "Tropical Woods" by S. J. Record belongs to the laurel family. It is known to the trade as Oriental walnut, Australian walnut, Australian laurel, and Queenswood.

QUESTION: What are the dimensions of a true cord and how many actual cubic feet of wood are usually contained?—M. R. W., Maryland.

ANSWER: A standard cord is a rack or stack of wood 8' x 4' x 4' and contains a gross measurement of 128 cubic feet. A cubic foot of solid wood increases with the diameter of the sticks. For example, experiments conducted by the Lake States Forest Experiment Station show that a cord of hard maple wood sticks 5" in diameter contains about fifty solid cubic feet of wood, while one made up of sticks 20" in diameter contains eighty-eight cubic feet of wood.

QUESTION: How can I kill ailanthus trees which are taking possession of my farm land?—W. T. H., Pennsylvania.

ANSWER: The trees may be cut in the late summer and the surface of the stumps painted with an arsenical weed killer or with a mixture of one pound of arsenic, one pound of washing soda, one-half pound of whiting in four gallons of water. Live stock must be kept out of the poisoned area for at least one month.

QUESTION: Several years ago I built a swimming pool through which runs a small brook. A number of times I had the entire pool cleaned out, and about one foot of the bottom soil removed; yet every time when the summer comes around the weeds are there again.

Any advice you are able to give me in regards to checking the growth of the weeds will be very much appreciated.—H. R., New Jersey.

ANSWER: The Bureau of Fisheries of the Department of Commerce suggest that the brook be diverted around the pond for eight hours or more, and the pond water be treated with sodium arsenite. This should be evenly sprayed over the surface of the pond in relatively small amounts. Commercial sodium arsenite weed killer, can be used at the rate of one gallon to 64,000 cubic feet of water. The sodium arsenite will precipitate in about eight hours, and during that time the water may poison live stock for a distance of 300 or 400 yards below the pond. Afterwards the water from the pond may be used freely. Sodium arsenite of this strength will not kill the fish.

QUESTION: I desire to plant some chestnut trees. Can you recommend a strain which is resistant to the blight? Is anything being done to develop a blight-resistant American chestnut?—A. F. L. E., Pennsylvania.

ANSWER: The question was referred to G. F. Gravatt, Senior Pathologist in the United States Department of Agriculture, who can recommend no strains of American sweet chestnut sufficiently resistant to be recommended for planting in areas where the disease is now present. There are, however, a number of Asiatic strains of chestnut capable of throwing off the disease, provided they are kept in favorable growing condition.

For several years the Office of Forest Pathology in the Bureau of Plant Industry has been securing seed from trees that appear resistant, but in no case have they succeeded in securing satisfactory resistant seedlings. The search continues and the office will be pleased to receive records of any unusually resistant American or Asiatic chestnut trees.

QUESTION: Of what wood are lead pencils made and approximately how much is used in this country?—J. M. N., South Carolina.

ANSWER: Incense cedar (*Libocedrus decurrens*) is the tree from which the greatest volume of United States pencils is manufactured, although large numbers are still made from the Southern red cedar, (*Juniperus Virginiana*). Approximately 20,000,000 board feet of incense cedar from the mountains of northern California and southern Oregon, together with about 500,000 board feet of Southern red cedar from Florida, Tennessee, and Virginia, are used annually.

QUESTION: What are the important species of trees in Georgia?—W. B., Georgia.

ANSWER: Longleaf pine, slash pine, yellow poplar, cypress, red maple, live oak, black gum, sweet gum, tupelo gum and sycamore.

QUESTION: Please name some street trees that most satisfactorily withstand wind and storm in this region.—D. H. D.,—Washington, D. C.

ANSWER: During the late August storm which struck Washington and neighboring region, American elm, oriental sycamore, red oak, and pin oak suffered the least damage. Red maple and silver maple were most frequently damaged.



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There can be only one—for Super-X is the shotgun load with Short Shot String—an exclusive Western development that enables you to pull down ducks and geese 15 to 20 yards beyond the range of ordinary loads.

Through the use of an ingenious, patented instrument, the Flightometer, the time of flight of each pellet in a shotgun load, from gun muzzle to target, is accurately measured. Guesswork is eliminated. With this instrument as a guide, the shot column of Super-X is held in a more compact mass as it flies through the air instead of stringing out like this.

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THE SUN RIVER RIDERS

(Continued from page 447)

around the face of bold cliffs where mountain sheep and goats watched from hidden ledges. They crossed roaring streams and scaled dark canyons—at times blazing new trails.

Gathering at Helena on the morning of August 16 the party motored to Benchmark Ranger Station, where "all roads end." With a string of twenty-seven animals the riders took the trail early on the morning of August 17, following the South Fork of the North Fork of the Sun River, past Deadman Hill. Six crossings of this river were made as the party pushed on beyond Bighead and Prairie Creeks. Time out for lunch and a search with field glasses for mountain sheep and goats along the rocky ledges paralleling the trail. Then "boots and saddle" across Goat and Bear Creeks until bold Arsenic Peak pronounced that the Allan Ranch, fifteen miles beyond all roads, was just ahead.

At the ranch there was a natural warm spring which everybody enjoyed. Fishing tackle was unlimbered and the quietest pools probed. Twilight and the stars just before "turning in" and the "good-night" lullaby of the North Fork.

The following day at Allan Ranch was given to further exploration, to fishing, to riding, to nature study, to preparations for the "big ride" ahead. The sun was bright, the air comfortably cool and clear. Around the night fire it was decided to remain at the ranch an additional day, extending the trip to eight days, for the streams were filled with rainbow and brook trout and the trails were endless and intriguing.

Then on the morning of August 20 the "big ride" got under way. In the early sunlight last "goodbye's" were sung and the horses climbed around Arsenic Peak and into a great wilderness that reached for a hundred miles to the north—a wilderness without roads, without occupants except for a scattered ranger or so. Out across a wide prairie the party strung—the same prairie that held the thousands of buffalo Lewis and Clark happened upon during their early pilgrimage into the Northwest. Sheep Mountain, a great rock pinnacle, more than 8,000 feet above sea level, loomed to the west, while Slategoat Mountain appeared to the north. Across Circle Creek, across Bridge Creek, across Grouse Creek and a dozen more the party moved on, stopping now and then for brief discussions or close examination of trees and geologic formations. At Moose Creek there was the first view of the Chinese Wall and the Continental Divide. The Sun River Game Preserve stretched along the North Fork. A steady climb before dropping down to Gates Park Ranger Station and an inspection of the airplane landing field maintained by the Forest Service for fire protection. Greetings were exchanged with Forest Service officers. Then on into deep timber.

Clouds began to form in the sky and Bear Top to the east and the Three Sisters to the west disappeared. The trail became darker—and steeper. The riders were gaining altitude—now around 7,000 feet. At Miner's Creek it began to rain, and Redhead Peak disappeared in the clouds. Camp was established at Baldy Bear—in the rain.

Spirits were running high and soon a great fire was going. A number of elk were seen just above camp. Beds were warmed and prepared. It was snowing just above.

A night of rain and cold—but everybody comfortable. Although there was snow all around it was decided to go on the following morning—to try for the Divide.

Six inches at the next camp site, and still

snowing. Up now, with the rain taking an icy turn, colder and wetter, and into the snow. Trails became difficult; the clouds hung closer about. Could they make it? That was what everybody was asking. It was decided that it would be foolhardy to try, so they turned about. The trails were slippery so they proceeded slowly and with care. Back past Baldy Bear, the old camp, but they decided to go on. The snow line was dropping. Hours and miles slipped by and then Gates Park Ranger Station. It had one room and four occupants—and there were fourteen riders. But it was warm there, and dry.

The miracle of Gates Park was well known to every Trail Rider the following morning. Everyone had been warmed and fed. Everyone had slept dry, although it rained throughout the night. Everyone laughed and swapped stories. Everyone became an eternal friend of the guardians of the forest.

"Boots and saddle" again and back into the broad valley of the Sun River where the first rays of sun had deposited a diamond dust upon the snow-clad peaks hemming them in. Mountains that had been enfolded in the warm sunshine as green and inviting, had become pinnacles of ice—magnificent in splendor yet cold and aloof. White clouds, yet low, moved swiftly from peak to peak, shaping and moulding them into a thousand different forms. It was a spectacle that awed, that silenced and inspired. It was a spectacle that few have witnessed.

For fifteen miles this epic in scenic beauty enthralled the riders. In every direction—east, west, north, south—the snow and clouds were busy with their sculpture. Yet the floor of the valley was ablaze with summer wild flowers.

The great gates of the Sun—where the North and South Fork meet—opened for the riders, and they scaled its rugged walls until Sawtooth Mountain disclosed the end of the wilderness. Once past it, Trip No. 2 of the "Trail Riders of the National Forests" became history—and each member of the party a full-fledged rider of the wilderness trail through an adventure that may never be duplicated by future parties.

A "NUTTY" SHOW

(Continued from page 461)

informed man on the beach, "though some of the articles mentioned are made from the leaves, wood, or bark of the tall tree which, for seventy or eighty years of its life yields on an average eighty nuts each year. Vermin-proof stuffing for mattresses, cushions, chairs and saddles is fabricated in America from parts of the tree, as are materials for making rope, cables, ship's rigging, canoes, oars and for caulking purposes."

"Anything else?" gasps the swimmer, looking at the cake of soap that came from a nut with new interest.

"Plenty!" assures the beach-sitter. "Cement, oil for cooking purposes and for fuel and light. A substitute for butter, a foundation for face creams, ointments, acids and some medicines. A filler for jellies, curries and candles. A fiber used by florists for retaining moisture about seedlings and potted plants."

"Perhaps this cake of soap that once was a nut will turn into some other kind of cake right in my hand," sighs the swimmer. "Don't tell me this nut won't yield real cake!"

"The meat of this nut, which is a favorite with children, becomes copra, under skilled hands, and copra is used in making some confections; while the meat, shredded, is extensively used as a filling for layer cake. The

young bud, cut from the top of the tree, forms a succulent vegetable. The juice of the flower is the foundation for a popular drink where the nuts are grown. The shell of the nut is used as a water-vessel. Oil from the nut is used in making candles, and a soap that lathers in salt water!" concludes the encyclopedia-in-breeches, while the swimmer, exhausted, floats on his back and blinks in the sunlight. "I don't doubt a word you have said," he groans, "but what is this hard-shelled Santa Claus to the human race?"

"My dear fellow," laughs his friend, "that cornucopia of a nut is the coconut, the most important of household nuts and the meanest of all the nuts to crack!"

Blatantly disregarding the fact that the show is over and that you are crowding out of the house to the merry tune of peanut shells being crunched under foot, our pestiferous announcer gets in a last word.

"The tall trees that bear the coconuts favor the shores of islands far out in the South Seas. To gather the nuts, bare-footed natives walk up the tree-trunks, using a loop of rope to assist them, which they throw around the trunks and constantly push higher and higher. With deft skill they hack off the nuts, from which other workers below with machetes cut apart the thick outer husks, pile the nuts on strange-looking buffalo carts without wheels, and ride them to the warehouses on the coast.

"The coconuts also grow profusely in the Philippines, where the unhusked nuts are formed into huge rafts and are floated down the streams to the coast. The future sculptors of each generation of American boys carve grotesque faces on the husks while still on the nuts, utilizing for their weird effects in whiskers and eyebrows the loose fibers attached to the husks by Mother Nature solely for this purpose. Thus proving that Mother Nature seems to enjoy her large task of providing us with the 'makings' of everything we need in life."

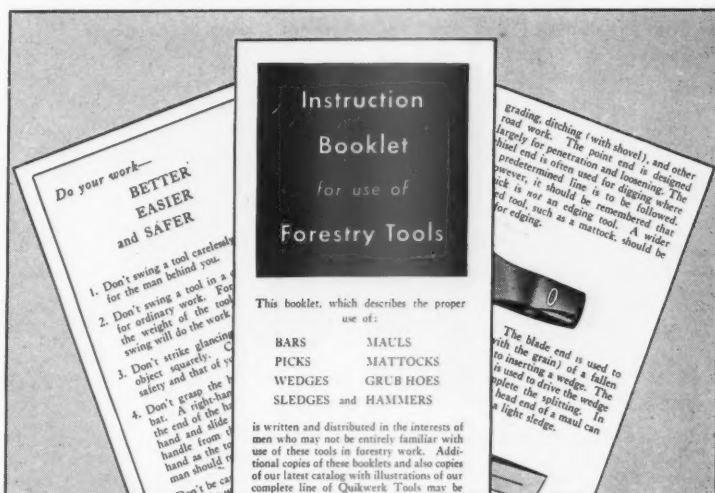
New Records Made In Nut Tree Planting Program

New records have been established by co-operators in the National Nut Tree Planting Project. They speak for unusual success in nut tree culture and for winning new participants in the program sponsored by Boy Scouts of America, The American Forestry Association, Department of Agriculture, and American Walnut Manufacturers' Association.

Roadside plantings featured a nut tree planting program in Texas which established a new high for cooperation in the Project which has for its objective the perpetuation of American nut trees by the planting of seeds gathered on historic grounds. Lieutenant Colonel George A. Lake, of Dallas, directed and participated in nut tree planting activities in his county which were marked by an attendance just short of one hundred thousand and involved plantings in 257 hamlets and cities.

Two highways leading out of Dallas were planted with nut trees for a space of one mile; one for twice that distance. Under his leadership twenty-six colleges and secondary schools and 227 elementary schools featured nut tree plantings. In addition, Colonel Lake distributed nut seeds from Mount Vernon, Arlington, Gettysburg, Vicksburg, and other historic grounds to nearly 1,500 individuals and arranged for plantings by churches and children's homes and in parks. The Dallas program will carry on next year, for Colonel Lake has made plans for the planting of three other cardinal roads and will continue to cooperate with schools and organizations in ceremonial plantings and with individuals who wish to plant trees.

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● Written expressly for men in the Civilian Conservation Corps' Camps and other forestry projects who may not be entirely familiar with the use of forestry tools . . . this new, illustrated, six-page booklet will promote better workmanship and improve safety conditions. Copies are available for general distribution.

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Our readers are invited to avail themselves of our Service Department, which is in a position to answer the above and other questions of a similar nature. The service is rendered without cost.

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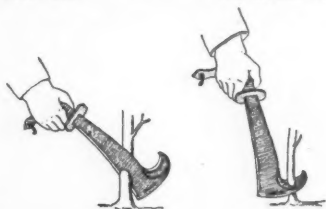
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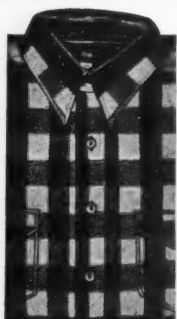
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Kindly send your catalog immediately.

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58th Annual Meeting

(Continued from page 457)

Ovid Butler, Executive Secretary of The American Forestry Association and Editor of AMERICAN FORESTS, upon his completion of ten years of constructive service with the Association, and presented him with a beautiful watch, the gift of American conservationists in appreciation of his achievements, and a portfolio containing letters expressing their sentiment.

During the evening program the conservationists heard James E. Scott, Supervisor of the White Mountain National Forest, in New Hampshire, tell of his forest and the "New Deal."

"The 'New Deal' means acceptance of public responsibility for the wiser use of our last natural resources," said Mr. Scott, "to the extent that it implies the widest possible sharing in the spiritual and material wealth which these gifts of the Creator should unceasingly yield."

He held that the forest program carried on in the White Mountains the past two decades is proof of the value of the "New Deal" in forestry that is being applied.

"The chief aim of management on the White Mountain National Forest under the 'New Deal' is to gain the maximum permanent public service from every acre," he said.

He pointed out that in the field of timber resource management first considerations now are the conditions of the timber stand, the readiness of the material for cutting, the completeness of utilization to be secured, and, above all, the condition, from the standpoint of successive crops in which the land will be left after cutting.

"And," he said, "as foresters and managers of forest properties we must clearly recognize that in a forest such as the White Mountain the management of the recreational resources ranks fully equal to management of the timber resources in importance, in complexity of the problems presented, and in the degree of careful survey and comprehensive planning required."

Over the years, he said, this public forest area has become one of the most intensively utilized summer recreation areas in the United States. In the National Forests, recreation is generally free. There is no charge for entrance, camping, hiking, use of roads, trails, or other facilities. Fishing and hunting are subject only to state laws and license fees.

"With the exception of the Appalachian Mountain Club, which has constructed a chain of huts throughout the higher portions of the

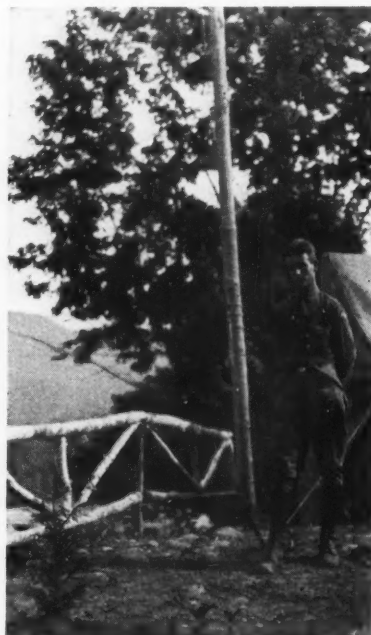
forest, there are no forms of concession or commercial recreation service on the White Mountain National Forest Land," he said.

On the morning of September 6 a motorcade of sixty cars moved the convention into the forest. Through Crawford Notch State Forest, a 6,000-acre protection area, the conservationists went to the Bartlett Experimental Forest, a field laboratory of the Northeastern Forest Experiment Station, where they viewed experiments being made to improve the growth of hardwood trees. From there they visited

Glen Ellis Falls, a scenic gem, and the Pinkham Notch huts of the Appalachian Mountain Club. During the afternoon they were given a demonstration of the latest developments in forest radio communication, and visited the Dolly Copp Camp in Peabody Valley, where nearly 50,000 campers come for recreation each year.

They heard Eagle Scout William Holleran, of the Daniel Webster Council of Boy Scouts, of Concord, New Hampshire, tell of the trail work being done in the forest by the Boy Scouts of America in co-operation with the Forest Service.

During the evening session, with Allen Hollis, President of the Society for the Protection of New Hampshire Forests, presiding, they heard Dr. A. F. Woods read a message from Secretary of Agriculture Henry A. Wallace, and Henry S. Graves speak on the public



Eagle Scout William Holleran told of the trail building activities of the Boy Scouts of America in their cooperative work in the White Mountain National Forest.

and private forests in New England.

"It seems only yesterday," said Mr. Graves, "that we were charged with endeavoring to withdraw land from settlement and farming in order to produce trees. Today the country is turning to forestry for the utilization of surplus lands that are a liability to the agricultural industry. We were charged with trying to perpetuate the wilderness, that would retard agricultural expansion. Today counties in some sections are zoning extensive areas to prevent settlement and are even paying the cost of moving settlers to points nearer to central communities. New York is buying abandoned farm and pasture land for rehabilitation through planting them with forests. Formerly many persons fought the idea of public forests and decried the idea of forestry as visionary and sentimental. Today public forests seem to be the only means of meeting the problem of reversion of areas, amounting to millions of acres in the aggregate, for tax delinquency. In many places, particularly in the South, the solution of the problem of soil erosion, now

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so extensive and destructive, has come to be one of forestry. All of this means an enlargement of areas devoted to forests. It means an expansion of public forests both national and state. It calls for policies in the planned use and development of forests which will be in-



Single file through famous Lost River

tegrated with the use of other classes of land in support of the rural industries and communities."

On September 7 the great motorcade visited the Gale River Experimental Area of the White Mountain Forest, the Long Pond Wild Life Development, where the Civilian Conservation Corps is reclaiming an old beaver lake for recreation and for the restoration of fish and wild life, and the Wildwood Civilian Conservation Corps Camp. Here Robert Fechner addressed the conservationists and luncheon was served to 400 people by the Corps.

Later the cars made their way over a beautiful mountain driveway to famous Lost River, the reservation of the Society for the Protection of New Hampshire Forests. And as the shadows of evening lengthened, the Flume and Franconia Notch, the State Forest Harboring the "Old Man of the Mountains" were visited.

In the evening an interesting discussion on the recreational uses of the White Mountain National Forest was led by H. R. Francis, Professor of Recreational Forestry, New York State College of Forestry, and L. H. Weir, of the American Playground Association.

The feature of the closing day, September 8, was the luncheon at the Mount Washington Hotel, at which Governor John G. Winant, of New Hampshire, served as toastmaster. The speakers were Senator Frederic Walcott, of Connecticut, and Congressman Charles W. Tobey and Will Rogers of New Hampshire.

Earlier in the day the convention visited the Cherry Brook Sale Area where they became acquainted with the methods of cutting, slash disposal, and forest improvement work being done in the National Forest. They also visited the Emergency Forest Work Camp on Gale River.

Resolutions

Approval of the clause in the Lumber Code under the National Recovery Act which accepts in principle conservative treatment of the forests of America, and a proposal for the continuance of the Civilian Conservation Corps were the major resolutions adopted by The American Forestry Association at its annual meeting at Franconia, New Hampshire, September 5, 6, 7 and 8. The resolutions follow, in full:

1. "The assembled members of the organizations here represented strongly commend the clause in the Lumber Code under the National Recovery Act which accepts in principle conservative treatment of forests, feeling that an unusual opportunity is presented to maintain and improve our forest resources."

2. "The results accomplished in the camps of the Civilian Conservation Corps visited by this convention, both in man-making and in forest improvement, lead this conference to commend heartily the efficient work of the United States Army, the United States Forest Service and the New Hampshire Forestry Department. It is urged that this undertaking be studied with the view to its further continuance insofar as conditions may warrant."

3. "Resolved that the thanks of the several groups here assembled are extended heartily to R. Y. Stuart, Chief, United States Forest Service, for clearly reaffirming the policy of long standing in refusing to grant permanent cottage sites on the White Mountain National Forest."

"It is further Resolved that those using the improved 'forest camp' areas may be required to pay for the special privileges which they are enjoying."

4. "The American Forestry Association and associated conservation organizations represented at the conference, hear with misgivings the announcement of a hearing on October 25 before the Plant Quarantine and Control Administration to consider the 'liberalization' of the plant pest protective regulation known as 'Quarantine No. 37.' When this important safeguard against importation of harmful insects and plant diseases was promulgated by The Federal Horticultural Board, our organizations, which had been urging such action, were confident that a great step had been taken towards greater security from scourges of such devastating character as the chestnut blight, pine blister rust and gypsy moth. We still believe that the regulation was fully justified, that its operation has been beneficial and that its 'liberalization' at this time would be a grave mistake."

"We go still further and request the Plant Quarantine and Control Administration to make the restrictions upon importation of foreign plant materials which can carry dangerous pests substantially more drastic than they are at present. The recent appearance of the Dutch Elm disease, threatening the possible complete extermination of our magnificent American Elm, is sufficient warning that the Federal Government should find a way to raise more effective safeguards than those now in force against the hundreds of potential foreign invaders."

5. "The White Mountain Meeting of The American Forestry Association, the Society for the Protection of New Hampshire Forests and participating organizations, has been remarkably successful because of the untiring efforts of the officers and members, given in a spirit of cordial cooperation. The members here assembled unite in expressing keen appreciation of the skillful planning and assistance of Forest Supervisor James E. Scott and the personnel of the White Mountain National Forest, Director Edward Behre and the staff of the Northeastern Forest Experiment Station, and State Forester John H. Foster and staff and to the management of the Forest Hills Hotel."



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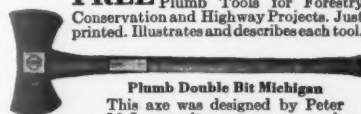
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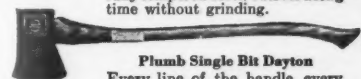
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pants.



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Destroys weeds, brush and undesirable grass growth while green, seeds and all. Used extensively by Municipal, County and State Highway Departments, U. S. and State Forest Service for cleaning roadsides, irrigation ditches, fire trails, and backfiring to control forest fires. Ask for New Bulletin No. 108 K containing largest assortment torches and fire guns, 25 sizes in 7 styles.

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13,000 Bags of Nut Seeds Distributed

Probably 500,000 people helped plant nut trees this spring as a result of the distribution of seeds and young trees from historic grounds by the committee in charge of the National Nut Tree Planting Program. Many were shipped in large lots to be divided and distributed by the recipients. More than 13,000 lots, ranging from ten seeds to two bushels, were sent from the storehouse at Gettysburg, Pennsylvania, and Arlington Farm, Virginia. They were sent to everyone who requested them, including civic and patriotic organizations as well as individuals. The far-reaching effects of the program are shown by some of the letters requesting seeds and those acknowledging their receipt.

The largest number of nut seeds distributed was from Gettysburg. Other grounds, famous in American history, which are being memorial-

ized by growing trees are Mount Vernon, Arlington, Vicksburg, Monticello, the Shenandoah Valley, and the homes of Andrew Jackson, Thomas Edison, Daniel Boone, and Francis Scott Key.

Certificates of Registration and Recognition are awarded by the committee to all who report on the planting of the nut seeds and trees. Those whose trees are growing at the end of a year may receive the gold seal of the successful tree grower to place on their tree planting certificates if they report the location, size, age, and condition of their trees to the Council of the National Nut Tree Planting Program, American Forestry Association Building, Washington, D. C. The Council represents The American Forestry Association, Boy Scouts of America, Department of Agriculture, and American Walnut Manufacturers' Association.

Typical Requests for Nut Tree Seeds

"I am a farm boy ten years old and I would like to have some black walnuts from Valley Forge."

CERARD PAUL LONG,
Pacific, Missouri.

"Can you send me about 25 more Black Walnut seeds? You will remember that we raised a number which we transplanted this year and would like to raise a few more this winter."

F. C. REMMELE,
Natick, Massachusetts.

"I am writing you asking for some of your black walnuts. I will agree to plant this seed as I am very fond of the walnut tree of which there are but very few left any more."

G. W. MIRACLE,
Fort Wayne, Indiana.

ACKNOWLEDGMENTS OF SEEDS

"I have not yet had the opportunity to thank you for sending the seeds and the splendid trees. They're so large and fine. Our nursery man, Mr. Tims, tells me they are the nicest trees and the sturdiest of any he has had in his greenhouse. Two bags of nut seeds came this morning."

We are quite proud of what we are doing in our schools. Our County is allowed \$2,500 a month for poor relief, so I am asking them to use part of this money to plant trees."

ARIE SORUM, County Superintendent,
Estherville, Iowa.

"I am not a Boy Scout, but an old one, born in 1861, but have always loved trees and have planted not a few. The nuts were planted in a nursery row in our farm. If they germinate and grow I have plans for all but one of them, in fact, that one, too, which we shall place in our own front yard."

W. F. ALEXANDER,
Owosso, Michigan.

"We received the bag of historical walnuts and they came in excellent condition. I am enclosing a program which we conducted on Washington's birthday. The Eunice Sterling Chapter, D.A.R. came out to the school and participated in the tree planting program. The tree planting is a splendid idea. We planted our walnuts in a nursery and when they come up we will transplant to desirable locations."

ELIZABETH BENDER CLOUD,
American Indian Institute,
Wichita, Kansas.



Rock Island, Illinois, Boy Scouts planting Gettysburg black walnut seeds in Lincoln Park where Lincoln took oath to serve in the United States Army under General Atkinson.

When Writing Advertisers—Mention AMERICAN FORESTS

Forestry Congress in Central States

Featuring subjects pertaining to land utilization, forestry education and legislation, and the work of the Civilian Conservation Corps, the 4th annual meeting of the Central States Forestry Congress was held at Chicago September 21, 22 and 23. Ten states—Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, Ohio, Tennessee, West Virginia and Wisconsin—were represented at the Congress.

Ovid Butler, Executive Secretary of The American Forestry Association, addressed the meeting on the subject of "Conservation and the Voter."

"President Roosevelt, almost overnight," said Mr. Butler, "has put conservation on trial as a major social endeavor of the American people. Its success, its permanence, its ultimate expansion, depends not upon Mr. Roosevelt but upon the American voters."

A PATRIOT'S GRAVE

Almost within the city limits of Washington is an ancient estate known as Green Hill, writes R. Woodland Gates. It belongs to the descendants of the old Diggs family ("Neighbor Diggs" of George Washington's day), original owner of Fort Washington (Warburton). After the destruction of Warburton by fire, the Diggs family removed to Chillum Castle Manor, now called Green Hill.



The cross marks the spot where L'Enfant was first buried, at Green Acres.

The most conspicuous land-mark of this place is a small group of ancient trees inclosing a cross and at its base a tablet stating that Major Pierre Charles L'Enfant, who platted the City of Washington, died at Chillum Castle Manor in 1825, and the memorial placed there on the 100th anniversary of his death marked the spot where his remains rested for eighty-four years. During all that time, L'Enfant was practically forgotten by all save the Diggs family, who had given this wonderful man a home for many years.

During the presidency of Theodore Roosevelt, interest in L'Enfant was revived, his burial place located, the remains disinterred and reburied at Arlington, not far from the Tomb of the Unknown Soldier—a belated recognition of a great man.

The circle of old trees, very beautiful and most conspicuously located, overlooks the city that is the real and perfect tribute to the memory of Pierre Charles L'Enfant. These trees have been nominated for the Hall of Fame for Trees by Mr. R. Woodland Gates, of Washington, D. C.

Additional Public Works Funds for Conservation

In addition to \$15,982,745 allotted to the Forest Service for improvement and protection work on the National Forests and the restoration of activities in the forest research program and the more active promotion of the national survey of timber resources, the Public Works Administration under Secretary Ickes of the Department of the Interior has authorized the expenditure of nearly \$10,000,000 for similar work in other bureaus.

The new Division of Erosion recently created in the Department of the Interior, headed by H. H. Bennett, formerly of the Department of Agriculture, has been allotted \$5,000,000 for control of soil erosion and for research.

Physical improvements and roads on the National Parks are receiving an additional \$3,204,450, while \$971,550 is available to the Biological Survey for improvement of bird refuges and for work in Alaska, and the Bureau of Fisheries is receiving \$300,000 for reconditioning and repairing fish hatcheries in many of the States and for proceeding with projects authorized under the White Act.

These sums are in addition to the \$50,000,000 specifically authorized in the Industrial Recovery Act for the building of roads and trails on the National Forests, National Parks, Indian Reservations and Public Domain.

HOW SHALL I REMEMBER?

How shall I remember
April, for the pain,
The poniard thrust of red leaves
In rain?

How shall I remember
Roses, summer-lost,
In a poplar's yellow flame
After frost?

How shall I remember
Even love, so long
As October sings this wild,
This windy song?

—ETHEL ROMIC FULLER.

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THE National Association of Gardeners has on file the names of many men fitted by training and experience for the care of fine gardens and greenhouses. The estate owner who wishes to engage a man for work of this kind can arrange, through the secretary of the Association, for interviews with men fully capable of handling the position offered. This service is rendered without charge to either party. Simply call VANDERBILT 3-0467 or write to

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Stabler. Thin shell; meat removed in one piece. Ornamental, spreading tree.
Thomas. Rapid growing. Worth planting everywhere.
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Chinese Chestnuts must replace American varieties. Hardy, bear freely, and are ornamental.

HYBRID HICKORIES

McAllister has a thin shell, is over 2 inches long, with plump kernel.
Burlington. Similar to the pecan in form. Tree hardy even into Minnesota.

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Modern plants for instruction in pulp and paper making, in kiln-drying and timber treating and a portable sawmill are features of this completely equipped institution. Catalog mailed on request.

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For further particulars address
FRANCIS G. MILLER, *Dean*

Forestry in Sweden for the Unemployed

(Continued from page 441)

institutions have been ordered to use wood, instead of coal, unless the cost exceeds by ten per cent that of coal.

Private factories for making charcoal briquettes will be aided with loans, free of interest for five years, up to two-thirds of the value. Another half a million has been added to the old fund established to aid with credit the purchasers of motor vehicles using charcoal generators. Alcohol, used for automobiles and other motors, will be tax exempt for another year and industrial use of wood alcohol, as well as that distilled from potatoes, has been regulated by law. For scientific research in fuels and power production the Government has set aside 60,000 kronor, to be used chiefly by the Academy of Engineering Science. Finally the Riksdag assigned another 500,000 kronor as state aid to the construction of roads and logging channels to render privately owned forest areas more accessible. In this sum is not included the much larger appropriation for general road building as unemployment relief, though from that the forests, whether public or private, may also benefit.

A still greater departure from the previous policy was the appropriation of 2,500,000 kronor for loans to forestry workers to enable them to buy small holdings of arable land in the forest sections, so as to provide them with privately owned homes and enough land to keep them busy when there is no work in the nearby forests. Such land is for sale at reasonable rates by either the state, the municipalities, or even the churches, as well as by the industrial corporations and the farmers. The purpose is to build up a corps of skilled forestry workers, who can live in their own houses and till their own soil, and at the same time take jobs in the nearby forests when there is work to do. In this way a greater economic resiliency is attained. If there is no forest work the holder of such a unit can raise his own potatoes and certain vegetables such as carrots and cabbages, feed his own pigs and keep a cow or two, which will make him and his family self-supporting for considerable periods, whereas the forest worker living in camps would either have to live on his savings or become a public charge when there is no work. This step, however, is but a link in the traditional Swedish policy of providing "own" homes for not only small farmers but also for factory workers and office employees. Preference in this case will be given to those who take up and develop new land for agricultural purposes.

To get the benefit of the "own home" funds previously established, it is necessary for the applicant to have a certain percentage of the required capital in advance, so that wholly destitute persons cannot get loans. The idea has been that young people who want to get married and get their own "place" ought to have saved something of their earnings. But the new law, which is intended to apply chiefly to the lumberjacks and log drivers of the North, offers them up to 4,000 kronor free of interest and for the first five years nothing needs to be paid back on the principal, either. After that the loan must be paid back in thirty annual instalments and as security the state holds a first mortgage on the property acquired. If the loan is not taken care of, the mortgage can be foreclosed by the local board in which the parish or town has three members

and the state the fourth, usually its "own home" representative in the community. The idea is that the borrower should live on part of the money while building his house and clearing his land, in the pioneer manner. When there is work in the forests or on the log drives, he gets part of his support that way. But each summer he is supposed to clear some of his land. The local loan board aids him not only with the choice of land and its acquisition, but also with the planning of his home, the surveying and the deed. His credit qualifications are purely personal. If he neglects his property, he is liable to lose it. The initial appropriation might seem small, but if the experiment succeeds, the next Riksdag may increase the amount.

For the regular "Own Home" movement, in which the borrower has to supply part of the capital himself, much larger sums are available at low rates of interest and for the entire unemployment relief action the Riksdag appropriated 180,000,000 kronor, which in turn presupposes contributions from local authorities, so that the entire amount made available this year totals 313,000,000 kronor. Most of it is to be spent for public works, so as to provide jobs for about 74,000 men for ten months. Since last January there has been a steady decrease in unemployment and once the upward movement is started many will be reemployed by private industries. At the end of June the number of registered unemployed was 145,458 as compared to 189,225 in January.

The action of the Riksdag this year in regard to new forestry laws and appropriations was based on an exhaustive report by a body of forestry experts, appointed in 1931. Its chief conclusions are that in the future the Swedish forests could stand an annual cutting of 49,050,000 cubic meters, while the consumption in 1929 and 1930 amounted to only 30,630,000 cubic meters. Consequently there should be taken out about 10,000,000 cubic meters more each year, to say nothing of the 35,000,000 cubic meters of deadwood and windfalls, which are now available.

At the same time, the report points out, practically none of this surplus is fit for either the sawmills or for pulp wood, so that the only way to use it is as fuel. Sweden has plenty of water power as well as firewood, but no coal mines worth mentioning and no gas wells. Its imports of coal from England and Poland and of gasoline from Russia and the United States are among the chief items in its trade balance. Under such circumstances the appropriations of the Riksdag to promote the use of domestic fuels was a natural conclusion, and to clean out this firewood would improve the forests for the growth of more valuable timber. At the same time the experts reported that by spending 300,000,000 kronor during the next three years for drainage and plantation, Sweden could increase its supply of pulpwood and sawmill goods by about 10,000,000 cubic meters a year. Whether it will be worth while to spend this amount depends on whether there is a market abroad for that much lumber and pulp. In the meantime the money appropriated for road building, canal digging and drainage in the forests will give work to idle men. And in large sections of the country forestry is the chief source of support for the population. It is practically the only form of cultivating the soil that is practicable.

Dedicate Tree to Henry S. Drinker

A mighty white oak in Penn's Woods was dedicated late in August to Dr. Henry Sturgis Drinker, former President of The American Forestry Association and President Emeritus of the Pennsylvania Forestry Association, as a tribute to his great contribution to forestry and conservation.

The great tree, standing at King-of-Prussia, in Pennsylvania, according to historians, is closely associated with George Washington. Under its branches he led his Colonial Army along the old Gulph Road on its way to the memorable winter encampment at Valley Forge.

More than 200 people from every section of the State, including many State officials, attended the brief but impressive dedication. The deed transferring the tree and the land on which it stands was presented to the State by A. H. Crockett, its owner for many years. "This grand old oak always seemed to me just a natural institution ministering to all that pass beneath it. No greater power, one feels, sent forth the shining glances of the sun than thrust these pillars above the earth," he said.

The deed was accepted in behalf of the State by Dr. Albert Cook Myers, Secretary of the Pennsylvania Historical Association and Chairman of the Historical Committee of the Valley Forge Park Commission.

Samuel L. Smedley, President of the Pennsylvania Forestry Association, paid a glowing tribute to the activities of Dr. Drinker.

"He is one who has contributed a large portion of his life and energies to the protection, not only of the trees of Pennsylvania, but to those throughout the country," he said.

Carl P. Birkinbine, Secretary of the Association, delivered the dedicatory address.

"One who knows him well said that he put his interest in trees second only to his interest in young men," he said. "Even when acting as President of Lehigh University, for which he builded so well, he found time to foster and further forestry, and after his retirement from this educational activity, he continued this work. Among his contributions to the cause was work for the modification of existing tax laws, so that tree growing would not be unfairly penalized. As President of the Pennsylvania Forestry Association, as President and Director of The American Forestry Association, as a member of the Forestry Commission of Pennsylvania, and of the Forestry Committee of the United States Chamber of Commerce, and an active worker in conservation organizations, he has given to this State and to his country a very practical idealism for the common good."

Fire Disaster in Oregon

Burning over a greater area than any forest fire in the State since the beginning of organized protection, the Tillamook fire, in northern Oregon, was brought under control early in September with a loss estimated to exceed several million dollars. More than 2,000 fire fighters, mostly members of the Civilian Conservation Corps, were thrown against the devastating blaze, which at times menaced several towns over a front of 125 miles. One life was lost, Frank Palmer, a Civilian Conservation Corps member from Marcel, Illinois, who was crushed by a falling tree.

At the time of going to press the actual area consumed by the raging flames could not be determined, but thousands of acres of valuable timber land were known to have been destroyed. The fire centered around the town of Tillamook, on State-owned and private lands.

At one time the flames were within fifteen miles of Tillamook, and so great was the force and intensity of the fire that the town was evacuated. The towns of Jewell and Hebo were also threatened.

Book Reviews

FAUNA OF THE NATIONAL PARKS OF THE UNITED STATES, by George M. Wright, Joseph S. Dixon, and Ben H. Thompson. Published by the Government Printing Office, Washington, D. C. Price twenty cents.

This is the first of a series of reports dealing with the vertebrate fauna of the National Parks to be prepared in the Branch of Education and Research of the National Park Service. The necessity of taking immediate steps to conserve the remaining faunal species in the National Parks of the country and the re-establishing, if possible, of those now practically extinct, made it imperative that these studies be conducted. This book cites methods adapted to these faunal investigations, presents an analysis of major types of faunal problems—their causes and treatment, gives a conspectus of wild-life problems of each park, and finally suggests a national-park policy for the vertebrate land fauna.—M. C.

ALL IN THE DAY'S RIDING, by Will James. Published by Charles Scribner's Sons, New York. 251 pages. Illustrated with drawings by the author. Price \$2.50.

Written as anyone "would talk who got his raising and education outside, where university roofs is the sky and the floors prairie sod," Will James has in this book forsaken his "rope arm" for the pen and drawing board, and the result intrigues the imagination and gladdens the heart. The simple joy of the author in his own work is no small part of the pleasure the book brings, for in it he lives again most vividly days when what happened "all in the day's riding" made up his whole life. Never, in the opinion of this reviewer, have the little—and big—things of the range,—the daily life of the cowboy and the herds—the experiences that have written the cow country indelibly into American history,—been more interestingly treated. Read the book. You will never regret it.—L. M. C.

WOOD ENGRAVING, by Bernard Sleight, R. B. S. A. Published by Isaac Pitman & Sons, New York, 1932. 154 pages, 80 illustrations from the works of past and contemporary engravers. Price \$6.00.

Since the art of printing as now practiced in all its ramifications is the direct outcome of the crudely cut "block books" of ancient times, any volume on the subject of wood engraving should hold glamour and interest for its readers. Wood engraving continues to hold its place as a minor but interesting department of the Arts, and Mr. Sleight's account of his own training and experience makes his book of particular value as the record of the life of one individual who from boyhood has created by means of the wooden block.

The book is illustrated with numerous and beautiful reproductions of the work of past and contemporary engravers, as well as some of Mr. Sleight's own work, showing interesting variations in the development of this art. During his career, Mr. Sleight has seen wood engraving flourish, die out, and be revised again by the enterprise and love of poets and artists. The book as a whole will prove a valuable addition to libraries and students' collections.—M. C.

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Awards will be based on beauty in photographic effect, utilizing trees singly, in groups, or in mass. There will be no restrictions as to tree species, season, or location. The competition opened May 1, 1933, and will close at midnight of October 31.

Write The American Forestry Association for additional information and entry blanks.

RULES OF THE CONTEST

The competition is open to any photographer, amateur or professional, in the United States. There is no limit as to the number of photographs a contestant may enter.

All pictures submitted, while they may be of any size and finish, must be mounted on a mat fourteen inches wide by eighteen inches high, standard size.

The name and address of the photographer, together with the title and location of the picture, must be printed on the back of each mat.

Every picture receiving either a cash or certificate award may be published, exhibited or put to any other educational use designated by The American Forestry Association without further arrangement with its owner. In case of a copyrighted picture the holder of the copyright must grant, upon entry, permission to The American Forestry Association to use the picture for exhibit, publicity, or other educational purposes.

No picture receiving either a cash or certificate award will be returned. Upon entry, no photograph may be withdrawn from the contest except upon agreement of The American Forestry Association. The decision of the judges will be final.

If the return of photographs not receiving awards is desired, sufficient postage must be enclosed when submitted. Photographs may be returned as soon as rejected by the judges, irrespective of closing date of contest.

While every possible care will be taken, The American Forestry Association cannot be responsible for photographs that may be lost or damaged in transit or in handling.

In submitting photographs, use this address: Editor, Photographic Competition, The American Forestry Association, 1713 K St., N. W., Washington, D. C. Otherwise, the photographs will be handled as regular material.

SAME DUCK SEASON, LOWER BAG

Two months of waterfowl hunting throughout the United States this year, with slightly lower bag limits, was the decision announced by Secretary Henry A. Wallace, of the United States Department of Agriculture, after approval by President Roosevelt early in September.

The 1933 regulations were based upon recommendations made to the Secretary by the Migratory Bird Advisory Board, representing all sections of the United States, which met early in July, and by the United States Biological Survey.

The delay in announcing the regulations was due to determined last minute efforts by certain restrictionists to have a federal regulation inserted, which the Advisory Board did not recommend, to control waterfowl feeding and baiting. This necessitated a hearing in Washington on August 28, at which the sentiment was overwhelmingly against a federal regulation on that subject. Instead the Advisory Board's recommendation that the Biological Survey study the matter carefully and report its conclusions at the meeting next year, and that the states take steps to correct any local abuses, was favored.

While the Advisory Board did not recommend a further reduction in bag limits, later information concerning breeding conditions having been unfavorable, the officials in charge deemed it wise to be on the safe side. The maximum daily bag limit on ducks this year will be twelve in the aggregate, with a special bag limit of five eider ducks and eight in the aggregate of canvasbacks, redheads, both scaups, ringnecks, the three teals, shovellers and gadwalls, as against fifteen and ten respectively last year. The possession limit is the legal bag for two days. The season remains closed on wood ducks, ruddy ducks and buffleheads.

The actual seasons for the various states,

worked out by the Biological Survey in cooperation with state conservation officials, are as follows:

September 21-November 20: Wisconsin, North Dakota, and five counties in northern Idaho.

October 1-November 30: Maine, New Hampshire, Vermont, Ohio, Michigan, Minnesota, Iowa, Nebraska, South Dakota, Montana, Wyoming, Colorado, Nevada, and five northern counties of Arizona.

October 16-December 15: Massachusetts, Rhode Island, Connecticut, New York (except Long Island), Pennsylvania, West Virginia, Illinois, Missouri, Kansas, Oklahoma, Utah, Washington, Oregon, southern Idaho and part of New Mexico.

November 1-December 31: Long Island, Delaware, Indiana, Kentucky, California and the northern zone of Texas.

November 16-January 15: New Jersey, Maryland, Virginia, South Carolina, North Carolina, Georgia, Alabama, Tennessee, Mississippi, Arkansas, Louisiana and the southern zones of Arizona, Texas and New Mexico.

November 20-January 15: Florida.

All of these seasons are subject to local restrictions fixing rest days. The season was closed entirely on brant in the Atlantic Coast states awaiting further information concerning the effect of the widespread disappearance of eel grass, their principal food.

The cackling goose, a strictly western species, was again placed on the open list because the birds are no longer in danger, and hunters are unable to distinguish them from other similar species.

This year hunting for jacksnipe will again be confined to the same season as for waterfowl, which means a reduction of one month for most states. Woodcock for the first time also have a possession limit of twelve birds, the limit for three days, to stop abuses of the past.

FORESTRY MEDALS AWARDED IN NEW HAMPSHIRE

Recognition for their excellent work in forestry was given New Hampshire farm boys and girls, members of several of the 4-H clubs, at the annual meeting of The American Forestry Association.

Robert Stevens, of Deerfield, was awarded a medal by the Association for doing the best individual forestry work in the State. He thinned and pruned a twenty-five year old pine stand covering ten acres. In addition, he planted 1,000 young trees.

Edwin Thompson, of Newport, was given the medal of the Society for the Protection of New Hampshire Forests whose annual meeting was held cooperatively with that of The American Forestry Association, for having done outstanding work in thinning and pruning about one-half acre of thirty-five year old pine trees.

Named as the girl who has done the best forestry work in New Hampshire, Miss Dorothy Hyjsak, of Merrimac, was presented a medal by the Association. Her record includes the planting of 1,000 trees, presidency of her local forestry club, activity in forestry leadership.

The State champion Kuncanowet 4-H Forestry Club, of Dunbarton, received The American Forestry Association plaque and \$30 cash prize presented by W. R. Brown, of Berlin, Chairman of the New Hampshire Forestry Commission. The club was represented by Donald Foote.

The ten members in the club, ranging from thirteen to nineteen years of age, cut gray birches from a seventeen-year old plantation of eighteen acres and carefully pruned the desirable pine. They also planted 4,500 trees and worked on their home woodlots.

The John Taylor 4-H Club, of Franklin, won second place in the State competition and was awarded \$20 by Mr. Brown. The sixteen boys in the club improved twelve acres of pine, taking out twenty-three cords of weed trees.

Third place among forestry clubs of the State was taken by the Sunshine Club, in Newport, which was given \$10 by Mr. Brown. The nine members pruned and thinned five acres.

The competition in the State this year was sponsored by the Society for the Protection of New Hampshire Forests, in cooperation with The American Forestry Association.

In the Heart of the Swamp

(Continued from page 446)

Reaching the lake, I came upon a view which I believe would justify anyone's most romantic idea of fairyland. Black waters slept before me, rimmed by great cypresses tressed in gray moss. From mystical margins groups of thoughtful pines emerged, to loom and listen on the verge. Over the retired and tranquil beauty of this place the gentle gold of the filtered morning sunlight rested.

But it was what was visible on the lake itself that chiefly engaged my interest. A happy flock of forty or fifty wood-ducks, just beginning to pair for mating, drifted idly in an estuary. Now and then I could catch sight of a male, in his sumptuous nuptial plumage, mirrored magically in the waters. Two great black pileated woodpeckers were investing for domestic purposes a hollow in a green tree-bay. Far off among the massive bases of the cypresses I saw a bull alligator lying motionless on the surface of the water. He lay like a prehistoric monster imbedded in some vast pool of black amber. Yet his presence fulfilled the mystery and the eerie unreality of this solitary place. I felt that I were visiting the headwaters of Lethe, the source of that fabled river, the drinking of whose waters brings oblivion.

For all these sights, however, I had been prepared; but not for what I now beheld, which established a record for observation in that region, not to my credit, but on account of pure luck. From behind a group of cypresses there suddenly drifted into sight seven snow-white pelicans. Their pearly plumage, the clear sunlight, the magic background of ebony water and gray trees and moss formed a fairyland picture. But what were these splendid visitors doing here in the deep heart of my river-swamp, fifteen miles from the coast? The brown pelican nests on the sandbars of the Carolina seaboard; but there is no record of the white pelican's ever having been seen before in all that vast stretch of country. Yet here they were, and here was I, watching them fascinated. Migrants that had wandered from their course, they had come to rest in this dim glamour land.

Trying not to disturb the wild life I had seen before me, I made a little detour, and then began to circle the borders of the lake. Well worn game trails led from the surrounding thickets to the water's edge. Here were deer-tracks innumerable; and those of the swamp-rabbit and the raccoon without number; the sprawled imprints of the wildcat, which is so heavy in proportion to its size that its tracks always go deep in damp soil; and here were the trappings of wild swine, with which the swamp is infested. I have seen wild boars, of formidable size and most sinister mien, killed by deer-hunters in the fringes of the swamp. But the most interesting track of all is the wild hog's worst enemy, the black bear. Here I came across a trail left recently by two old bears. There are not many left, even in this wilderness, the reason being, I think, that in time of high water, they swim to the distant mainland, and they fall a prey to hunters.

Toward the end of my circuit, I found, high in the towering cypresses, a colony of great blue herons nesting, and a group of the rare and beautiful snowy egrets beginning domestic activities. Yet, while I have seen some rare sights in the deep swamp, its abiding character is perhaps better understood through the observations that a casual visitor might make; for the things that he would see would be typical rather than exceptional. After becoming oriented to the apparently chaotic

wilderness of the place, he would observe that nature always maintains in her house an ancient order: the streams have their primordial courses; the green armies of the marsh march up to the woods, and there they eternally halt; the animal paths that wind through the morasses and along the ridges are immemorial routes, laid with the unerring engineering skill of the children of the wild. The observer will also notice that there is not a tumultuous riot of jungle in the swamp. The blackberries, the alders, the canes, the bays—these grow in isolated clumps. The vines are more promiscuous,—the jasmine, the smilax, the wild wistaria, the supplejack, and the bullace clambering over any bush or tree to which they can take hold. I think the chance visitor to the swamp in the late summer would be charmed with the large festiveness of burly muscadines bearing their lustrous grapes on natural trellices of cypress and black-gum trees, fifty and sixty feet from the ground. And he would be equally taken by the delicate beauty of the wild fringe-tree, the stately tree-bay with its blossoms almost as sweet as gardenias, and with the dark majesty of the choiring pines.

The wild turkey, though the lordliest, is by no means the only game bird of the swamp. On stormy days black-ducks and mallards and widgeons love these still lagoons, these sheltered creeks; and toward the end of their winter visit, when food in the marshes is becoming scarce, they pour into the swamp in beautiful myriads to feed on acorns.

Out of the bush-canes the visitor will flush woodcock, and on the edges of the marsh the Wilson snipe. The mourning dove does not live in the swamp, but appears to love it as a roosting place, and at twilight can be seen speeding across the lonely river to the dim land of the cypress and the tupelo. It seems, indeed, at that witching hour, a realm of sleep and dreams, a realm of the spirit far sequestered in the shadows and the starshine of mystery.

Such a place is a constant fascination to the lover of birds; for here the rarest and shyest birds are to be found—the Bachman's warbler, the Swainson's warbler, and the Kentucky warbler. Here all day long in the dreaming trees the parula and the vireo sing. Even that tremulous whim of nature, the ruby-throated hummingbird, is found in the heart of the swamp—here, as everywhere, entirely at home, busy, and actively joyous. Here, in migration, one may see the scarlet flame of the tanager, and in his gorgeous nuptial plumage likewise, the lovely Baltimore oriole.

In a natural wilderness of this character one is impressed by the delicate and perfect balance of nature. Here all the normal forms of life survive the centuries. Rarely does a species seem to gain an ascendancy. Here the shrinking violet has her place, and the stupendous cypress; here the immaculate water-lily and the mourning pine; here the gentle and exquisite wood-duck and the grim alligator. There is competition, but not to the extreme of monopoly. The swamp makes one realize that things will be as they have been; that there are no experimental violent changes in nature. Whatever advances she makes are evolutionary, not revolutionary; she seems to work with the assured calm that belongs only to one who is conscious of God as his Helper. The slow and irresistible lever of nature is pivoted and moves on the ancient and massive fulcrum of a plan divine.

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"The 'Story of Hay Holler,' by John Thompson Auten, in the September issue of **AMERICAN FORESTS**, is one of those rare picturizations that should be read by everyone. It is vivid and true, a thing that we cannot put out of our mind."—ANDREW L. FELKER, Commissioner of Agriculture, New Hampshire.

RACKETEERING THE OUTDOORS

(Continued from page 438)

simple by patent from the Government is resorted to by mining locators when the value of the land warrants this procedure. The claimant must have a mineral survey made of the land. This constitutes an application for patent and, if accepted and uncontested, title passes upon payment of \$2.50 an acre for placer claims and \$5.00 an acre for lode claims. The miner has made affidavit in his application that he has expended \$500 for mineral development. It is not necessary to show that the chief value is for mineral, or to demonstrate more than a mere probability that the development of minerals is an economic feasibility. Reports on 2,000 mineral cases in the National Forests of Oregon and Washington express the firm conviction that not more than fifty properties, either patented or unpatented, would receive serious consideration from a competent mining man. Only two mines were operating at the time of this report. In the National Forests of California approximately 170,000 acres of land have been patented for mineral exclusive of oil and coal. Not more than ten per cent of this area has ever been actively mined for mineral and less than two per cent is being mined today in any form. Similar conditions prevail on a less extensive scale in other parts of the West. It is an incentive to risk a few dollars an acre on a claim that will bring hundreds of dollars an acre on the market if title can be secured. In southern California the most worthless mountain land will sell for \$5.00 an acre, while choice tracts bring from \$300 to \$10,000. The increasing demand for recreational land creates these values, and as population and summer travel to other mountain regions increase these values will extend to northern California and other states. This sort of mining is a pure and simple real estate scheme.

Thirty-five million people should be interested in this racketeering of the public playgrounds. That is the number using the recreational facilities of the National Forests last year. It is directly up to these people

to demand and see to it that this new form of land grab is stopped. For the past six years the Forest Service, as the agency chiefly interested in the administration of these recreational lands, has endeavored to curb the racketeering. It has no issue, it declares, with the bona fide mining industry nor with the sincere prospector and miner, but it does regard the mining laws as imposing real obligations. In this it is not alone, for the Interior Department, which administers these laws, is also requiring better compliance. The basic fact is that the mining laws are not in accord with present economic and social conditions. Until some change is made they will continue to be used by unscrupulous people to enrich themselves at the expense of the public. Too much harm has been done already. Much greater losses can be expected unless the general public, the real owners of these lands, demand that the mining laws be revised to coincide with present day development.

Legislation, enacted by demand of public sentiment, has relieved the situation to a certain extent in southern California. In 1928, Congress approved an act that closed about one-third of the Angeles National Forest to all mineral locations. This was brought about by the flagrant misuse of the mining laws. In 1931, Congress passed an act which provided that no mining location could interfere with a previously issued special use permit on the Cleveland or San Bernardino National Forests. This gives protection to those who are renting land from the Forest Service for summer camps and other uses in these forests.

Several bills on this subject were introduced in the 71st Congress but did not come to a vote. One of these bills makes it a misdemeanor to use a mining location for any other purpose than mining and provides a maximum fine of \$500 or one year imprisonment, or both, as a penalty. Another bill proposed to separate the surface and sub-surface rights on a mining location, giving the locator the right to the minerals with enough of the sur-

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face to develop the claim. This would kill the "real estate" mining boom, since surface rights are all that this class of "miner" is interested in. Another proposed remedial law is to extend the permit system of prospecting for minerals to the National Forests of the West. Such a system is already in effect in the eastern National Forests. All the eastern forests have been purchased by the Government from private owners, while, in the West, prospecting is done on the public lands which have always been owned by the United States. The permit system has been in effect on nitrate, sodium, oil, coal, phosphate, oil shale, and potassium. Such a system applies equally to other minerals.

Many years ago the Government gave away or sold for \$2.50 an acre the stands of giant sequoia of the Sierra Nevada and the redwood of the Pacific Coast. Now these natural wonders are being bought back from private ownership at hundreds of times their original cost, to be preserved for all the people. Unless an end is speedily made of the mining racket, the Federal Government in years to come will unquestionably be forced to buy back at extravagant prices the summer playgrounds that are now slipping away from public ownership.

WOOD'S SERVICE TO THE TELEPHONE

(Continued from page 453)

form of bales to the Western Electric Company, the manufacturing unit of the Bell System. In the Western Electric shops at Hawthorne, Illinois, and Kearny, New Jersey, it is mechanically worked with water to a consistency sufficient to form a suitable covering. Up to this point the process is the same as in the manufacture of paper. The pulp is deposited on a screened cylinder as in the making of paper, but instead of forming a wide sheet, small dams divide the pulp into sixty narrow ribbons. The wire is brought into contact with the ribbon and completely embedded in the pulp. The excess moisture is removed by pressure rollers and the pulp is formed about the wire in an even sheath and dried at high temperatures. Millions of feet of wire have now been insulated with pulp, fabricated into cables, and put into service in the telephone plant.

Although by far the greater amount of underground cabling is carried in vitrified clay conduits, in numerous instances wood conduits have been found more advantageous. Creosoted southern pine conduits are frequently used in urban areas where underground cabling has been necessary to replace overhead wires and cables. After the sections are trimmed and bored, they are impregnated with the creosote in closed tanks by the pressure process.

A very large amount of wood, for the most part white pine and tamarack, is used to make the cable reels on which the lead sleeved telephone cable is shipped to various parts of the country. Because of the great weight of the cable, the reels must be substantially constructed to insure a satisfactory life. After the cable has been removed from them they are returned to the factory for further use, and after each such trip they are repainted. The requirements for wood for this purpose have run into millions of feet during years of extensive construction.

This widespread use of timber products by the telephone industry, varying from the pole which is essentially a complete tree stripped of its branches to the individual wood fibres in pulp, necessitates an extensive and continuous study of wood and its properties. A

WHO'S WHO

Among the Authors in This Issue

ROBERT W. AYRES (*Racketeering the Outdoors*) is connected with the United States Forest Service, with his headquarters in San Francisco where he is assistant in the office of Public Relations. Mr. Ayres is a graduate of the Yale Forest School and has held various positions with the Forest Service, such as student assistant, technical assistant, forest supervisor, and logging engineer. His experience in the woods has extended over a period of more than thirty years.



Robert W. Ayres

GEORGE Q. LUMSDEN (*Wood's Use to the Telephone*) is a member of the technical staff of the Bell Telephone Laboratories, Inc. He graduated from Cornell in 1922 and was appointed an assistant at the University the following year, during which time he received the degree of Master of Forestry. Following that he entered the Inspection Engineering Department of the Bell Telephone Laboratories where he was engaged in inspection studies of timber products. In 1927 he became a member of the Laboratories' Outside Plant Development Department where his work has been in connection with general development studies of timber products and their preservation.

NABOTH HEDIN (*Forestry in Sweden for the Unemployed*) is manager of the American-Swedish News Exchange. He is a graduate of Harvard and during the War was a Paris correspondent for the *Brooklyn Eagle*. Mr. Hedin is a native of Sweden.

ARCHIBALD RUTLEDGE (*In the Heart of the Swamp*) lives in Mercersburg, Pennsylvania. He is a well known writer and poet and a conservationist of national repute. He has for many years been a contributor to AMERICAN FORESTS, most of his articles dealing with his beloved "low country" along the southern Atlantic Coast. Some of his best known books are *Children of the Swamp and Woods*, *Days Off in Dixie* and *Peace in the Heart*.

RUTHERFORD PLATT (*The Resurrection of Mr. Jasper Gray*) is a member of Platt-Forbes, Inc., of New York City. The strict old French form of his ballade lends an atmosphere of antiquity to his poem, most fitting for its theme.

WILLIAM B. ASHLEY (*A "Nuttty" Show*) is an author and poet who has his residence at Tuckahoe, New York.

considerable body of engineers in Bell Telephone Laboratories is constantly engaged in these studies. In addition, engineers of the Bell System have cooperated with the American Standards Association, the American Wood-Preservers Association, the Forest Products Laboratory at Madison, Wisconsin, and other organizations concerned with wood investigations. They have taken an active part in the recent work of the American Standards Association in setting up new uniform specifications for wood poles. The breadth of the Bell System's interest in timber products, indicated by these cooperative activities, reflects the importance it attaches to the use of wood in telephone work.

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